23 December 2005

The Project Manager
Brunswick Area Sewage Augmentation EIS
Byron Shire Council
Via email: Ian.bishop@byron.nsw.gov.au

OCEANWATCH AUSTRALIA

HEALTHY CATCHMENTS
HEALTHY OCEANS

Dear Sir/Madam

Re: Brunswick Area Sewage Augmentation Environmental Impact Statement

This letter sets out the comments from OceanWatch Australia Ltd (OWA) in relation to the Brunswick Area Sewage Augmentation Environmental Impact Statement. OWA. is an environmental, not for profit organisation sponsored by the commercial seafood industry to represent the environmental interests of industry with respect to protecting and enhancing fish habitats and water quality and building sustainable fisheries.

Overview

OWA agrees that proposed construction of a new Mullumbimby-Brunswick Head Sewage Treatment Plant (STP) and decommissioning of the existing Mullumbimby and Brunswick STPs will most likely result in a significant improvement in water quality of the receiving waters of the Brunswick River estuary. This will be attributed to the superior treatment of effluent combined with maximal re-use resulting in the discharge of higher quality effluent and more importantly, a reduction in the volume of effluent discharged in comparison with the current situation. OWA acknowledges that at present that commercial fishing and oyster farming is not permitted in the river, however, given the expected improvements in water quality upon commissioning of the proposed STP, this situation should be re-examined, particularly with regard to re-opening up areas for commercial harvesting of oysters.

OWA would like to commend Byron Council for a number of aspects of this proposal that aim to enhance the aquatic environment of the Brunswick River such as,

- the development of an effluent re-use scheme to maximise the opportunity for the beneficial re-use of the effluent; and
- ensuring sufficient capacity of the STP for peak tourist loads and future development within the serviced area to 2025.

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However, from a review of the EIS and consultation with industry and experts regarding the primary concerns of the seafood industry relating to the introduction /augmentation of STPs, OWA believes there is room within the current proposal to ensure further protection and enhancement of the aquatic environment which are outlined as follows.

Specific Comments relating to the proposal

3.2 Sewage Transfer (Power Outage)

The EIS states that several pumping station referred to in Table 2.1 will require upgrading to provide for adequate storage in the advent of a power outage. However, the pumping stations 4007, 4009 and 4010 with "unknown" capacity also need to be investigated in relation to possible requirements for additional storage.

It is encouraging to see that the proposal includes the installation of telemetry systems to monitor the status of each pump station. However, it is crucial that Council has an adequate emergency response routine and asset maintenance to prevent raw sewage spills into the receiving waters. Many regional councils have inadequate response regimes to such events, ultimately resulting in death and disease to aquatic flora and fauna. This is particularly apparent if parts of the estuary can be re-opened for oyster harvesting following augmentation.

3.3.9 Wet Weather Flow Bypass

The potential for a wet weather storage facility needs to be investigated. Such a facility would store any wet weather overflows and pump these flows back to the STP for proper treatment before discharge into the constructed wetland. This would result in superior protection of the aquatic environment in comparison to the current proposal to simply discharge wet weather flows directly into the constructed wetland.

3.9.3 Effluent Re-use Scheme Operation

A system needs to be set up between Council, and the Department of Primary Industries (DPI) Fisheries Aquatic Protection Unit (as well as the Department of Environment and Conservation and possibly NSW Health) in the advent of any system failures (eg sewage spills). DPI in particular, needs to be notified and consulted in regard to the development of any contingency plans, especially those which involve works that may divert flows, block fish and prawn passage or otherwise impact on aquatic habitat.

7.5 Mitigation Measures and Safeguards

DPI needs also to be consulted in the development of mitigation measures/contingency plans for the construction and operation of the STP, which has the potential to impact on aquatic habitat and fish and shellfish, and recreational fishing that takes place on the river.

Sewage Treatment Plant technology p 2.22

The EIS states that alum with be added to the bioreactor to aid in the precipitation of phosphorous from the effluent stream. If the Alum by-product is in the form of a biosolid, it is classed as a hazardous waste and requires disposal at an appropriate landfill site. Council needs to ensure the correct disposal of Alum if it emerges from the treatment process as a biosolid.

3.3.3 Effluent Quality

The EIS states that the effluent meets DEC's Accepted Modern Technology Standard upon discharge except for total phosphorous (P). The EIS proposes that the standards will be met for total P following treatment through the constructed wetland. OWA acknowledges that Council will monitor discharge from the wetland and will propose certain measures in the event that total P exceeds the Standards. However, OWA recommends further investigation of additional or alternative means of treatment such that the Standards for total P are met upon discharge of effluent to the wetlands, as opposed to hoping that the wetland treatment will suffice. This is particularly important as the nature of the dispersion and dilution of the effluent plume has not been accurately modelled. See below.

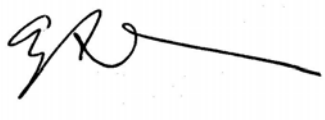
7.4.1 Effluent Releases into the Brunswick River Estuary – Dispersion and Mixing Modelling Results

Modelling of the dispersion and dilution of the plume has not been completed (the concept design for the diffuser has not been finalised). Without accurate modelling, there is no certainty of the nature of dispersion or potential accumulation of pathogens, faecal coliforms or nutrients (EIS states that nutrients will return to background levels within 500m from the discharge point). This is of notable concern with respect to total P exceeding the Standards upon discharge.

Conclusion

It is apparent that the proposal has the potential to result in a significant improvement in water quality of the Brunswick River estuary. There are, however, a number of areas that need further attention namely, wet weather storage and accurate modelling of the dispersion and dilution of the effluent plume, particularly with respect to total phosphorous. DPI also must be consulted regarding any mitigation measures or contingency plans that may impact on aquatic habitat, fish/prawn passage etc to ensure adequate protection of receiving waters and aquatic habitats. Please do not hesitate to contact me on (02) 9660 2262 should you require further information.

Yours sincerely



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