

11 August 2005

The Hon. Frank Sartor  
NSW Minister for Planning  
Level 31  
Governor Macquarie Tower  
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Via Fax: (02) 9228 4711



FOR THE FUTURE OF OUR MARINE ENVIRONMENT

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Dear Minister

**Proposed Brooklyn and Dangar Island Priority Sewerage Program**

This letter sets out the concerns of Ocean Watch Australia Ltd (Ocean Watch) and the Hawkesbury Trawl Association (HTA) in relation to Sydney Water Corporation's (SWC) proposed Brooklyn and Dangar Island Sewerage Scheme (detailed in SWC's *Supplement to the 2000 Environmental Impact Statement for Brooklyn and Dangar Island Priority Sewerage Program*). We request an urgent meeting with you regarding the potential impacts of the Brooklyn-Dangar STP on the commercial trawl fishing industry operating in the river. We understand that the Representations Report for this proposal is currently with you. We provided submissions on the supplementary EIS dated 8 April 2005, but have since been advised by SWC that the concerns raised have not been further addressed in the Representations Report for your consideration.

Ocean Watch is an environmental, non-government organisation sponsored by the commercial seafood industry to represent the environmental interests of industry with respect to protecting and restoring fish habitats, improving water quality and promoting sustainable fisheries. The HTA represents the estuary trawl fishery on the Hawkesbury River and works to ensure the viability of the fishing industry and protection of the Hawkesbury River ecosystem.

While we acknowledge that the proposal will result in an overall improvement in water quality we have significant concerns relating to impacts of the freshwater discharge plume at the Road Bridge on the marine ecosystem, resulting in social and economic issues for both the commercial and recreational fishing industries on the river.

The Hawkesbury-Nepean supports a valuable seafood industry, with the second highest estuarine production of prawns and the only squid fishery in NSW. All are of the highest quality. The market value received for prawns is far greater than for prawns caught in other estuaries (in 2000-2001 the Hawkesbury Estuary Prawn Trawl Fishery catch alone was valued at \$1.5M. The River also generated the second highest shellfish production in NSW, prior to the demise of the shellfish industry as a consequence of QX disease). In addition, the Road Bridge is one of the most popular recreational fishing locations in NSW.

Ocean Watch, the HTA and the Department of Primary Industries made submissions to SWC outlining the following concerns with respect to freshwater discharge and the need to review alternative options for recycling and reuse and relocating the discharge point. These issues have been ignored in the environmental assessment process and the Representations Report provided to you.

### **Migration of fish and prawns**

The Director General made a specific requirement for SWC to gain an “understanding of the impact of effluence discharge on prawn migration” as part of the Supplement to the 2000 Environmental Impact Statement for Brooklyn and Dangar Island Priority Sewerage Program. This has not been adequately addressed by SWC.

Post-larval prawns enter river estuaries during summer and early autumn and the juveniles move upstream. The juveniles remain in the estuaries and rivers through the autumn and winter, buried in the bottom sediment. By about Spring, adolescent and maturing prawns begin moving downstream, and between November and April each year they move out to oceanic waters to breed. (In the Hawkesbury, school prawns move into the estuary during the spring months, grow to maturity and move out to the oceanic waters to breed in the autumn months. Prawns that have not reached maturity remain in the estuary and bury in the bottom sediment during the winter unless there is significant rain to colour the water ). Freshwater plays a key role in triggering the migration of prawns at various stages of their life cycle within a river system (Ruello 1973, Glaister, 1978). For example, researchers have noted the following occurrences after rain: enhanced seaward movement of school prawns in response to the disturbance of bottom sediments by increased river flow; increased quantities of nutrients being transported into estuaries and adjacent coastal areas via freshwater runoff; a strong freshwater inflow to the estuaries which stimulates the school prawns' ovaries to mature; increased density of prawns at sea after good rainfall which improves the prawns' chances of mating and spawning; changes in salinity in coastal waters produced by freshwater discharge which facilitates the movement of larvae and post-larval school prawns from the sea to the estuaries.

There is a lack of past and current research or investigation on the impact a freshwater effluent plume located within a saline estuarine environment will have on prawn migration, particularly at the larval stage. In particular, SWC have not assessed the impact the freshwater plume may have on prawns and fish stocks in the river, in relation to salinity levels and temperature at the Road Bridge. There has been insufficient work conducted to identify if the plume will act as a barrier to fish and prawns and impact on the survival of prawn larvae (and on the quality of the product).

The plume discharge point is located right in the heart of the migration path for the prawn fishery in the narrowest point in the lower estuary at the Road Bridge. Of particular concern to industry is if prawns avoid their migration due to the impact of the freshwater plume thus effectively reducing the viability of the industry in this estuary.

## **Safety of the product**

The discharge of the plume will negatively impact on the operation and economic viability of the seafood/fishing in terms of exclusion zones, restrictions on cooking and cooling of prawns, closures to shellfish and potential reduced quality of the product, with the STP discharging effluent in the middle of commercial fishery trawl grounds. The NSW Food Authority and SWC have indicated that they will enforce a closure zone for oysters 500m upstream and 500m downstream from the discharge point, and potentially an exclusion zone of 200m around the discharge point to commercial and recreational fishing activities. Public confidence in the products are likely to be impacted once they are made aware of both the exclusion zone and that that cooking and cooling of prawns is occurring around an STP outfall.

## **Recommendation**

Ocean Watch and the HTA strongly recommend that:

- SWC's proposal in its current form is rejected and that you provide us with an opportunity to meet with you to further discuss these issues of critical importance to the viability of the seafood industry on the Hawkesbury River.
- A thorough investigation of feasible alternative methods of disposal including re-use, relocation of discharge point is undertaken. The ultimate solution is re-use of effluent consistent with the recommendations of the recent Hawkesbury Nepean River Management Forum's Report, the Healthy Rivers Commission's Inquiry into the Hawkesbury Nepean and the objectives of Australian and New Zealand Environment and Conservation Council (ANZECC) Guidelines (2000). SWC's review of reuse opportunities in the Supplement to the EIS has been extremely dismissive and limited.
- Further investigation is undertaken by SWC to assess the impacts of this STP proposal on the marine ecosystem and the social and economic impacts to the commercial and recreational fisheries in terms of the impact of freshwater discharge and temperature on the migration and survival of juvenile prawn and fish species, suitability for human consumption etc before the proposal is approved.

We attach a copy of our submissions, along with the Department of Primary Industries for your information. Please do not hesitate to contact me on (02) 9660 2262 should you require further information regarding these matters.

Yours sincerely



**Anissa Lawrence**  
**Executive Officer**  
Ocean Watch Australia Ltd