OXYGENATION OF CANNING RIVER AND IMPACT ON RIVERS OF NUTRIENTS FROM WASTE WATER TREATMENT PLANTS

4701. Hon Helen Morton to the Parliamentary Secretary representing the Minister for the Environment

(1) What has been the total expenditure per year to operate the oxygenation plant at Bacon Street in Cannington since commencement of the program?

(2) Over what area (square metres) does the oxygenation plant increase the oxygenation level in the Canning River?

(3) What is the impact of the tidal movements on the oxygenation plants?

(4) In relation to (1), what was the benefit achieved by making the expenditure when fish kills are still occurring?

(5) How successful has the oxygenation plant at Bacon Street been on eliminating fish kills downstream of the Kent Street Weir?

(6) What is the total nutrient input in tonnes per annum from the Water Corporations waste water treatment plants situated on the catchments feeding the Swan Canning Estuary, including the Avon Catchment?

(7) What is the total nutrient output in tonnes per annum from each waste water treatment plant on the Swan Canning Catchment and the Avon River Catchment?

(8) What does the oxygenation plants do to remove the nutrients that cause algae blooms?

(9) What is the Swan River Trust doing to reduce the impact of nutrients coming from the Water Corporation wastewater treatment plants, situated on the Avon and Swan Canning Catchments?

Hon SALLY TALBOT replied:

Swan River Trust

(1) The below figures incorporate expenditure for the two oxygenation plants Bacon Street and Camsell Way.

1997-98	$50,000+20,000 (BOC) = $70,000
1998-99	$220,000
1999-2000	$91,556+$235,000 (Coast and Clean Seas) = $326,556
2000-01	$285,000
2001-02	$285,000 + $1,811 (Coast and Clean Seas) = $286,811
2002-03	$140,022
2003-04	$140,000
2004-05	$140,000
2005-06	$140,000 + $87,000 for upgrade of the pipes and maintenance
2006-07	$140,000

(2) The Canning River oxygenation plants oxygenate 2.3km of the river.

(3) In the Canning River, the zone of oxygenation is above the Kent Street Weir and operates when the weir is closed, therefore not influenced by tidal movement.

The effect of tidal movements on the zone of oxygenation for the Swan River oxygenation trial will be assessed as part of the ongoing feasibility study.

(4) No fish deaths have occurred within the zones of oxygenation.

(5) The Canning River oxygenation plants are situated above the Kent Street Weir and only operate when the weir is closed. During this period, there is negligible exchange between the freshwater upstream and the saline water downstream of the weir, therefore the oxygenation does not influence downstream conditions and has no effect on limiting fish deaths downstream of the weir.

(6) Please refer to the Minister for Water Resources.

(7) Please refer to the Minister for Water Resources.

(8) When oxygen levels are low, decomposition and nutrient recycling processes are inhibited and can also lead to sediments releasing nutrients. By increasing the oxygen levels in the bottom waters, decomposition and recycling processes function more efficiently, resulting in removal of nutrients from the system and prevention of nutrient release from sediments. With oxygen addition phosphorus is not released from sediments and nitrogen is removed from the water back to the atmosphere.

(9) The Swan River Trust funds nutrient intervention programs in some tributaries of the Swan and Canning rivers. The locations of these programs are within priority catchments, identified through long-term water quality monitoring. Water Corporation wastewater treatment plants may be one of many land-uses within the catchment that contribute to the nutrient load of the waterways.