



Richmond Valley Council Evans Head STP Flow Balancing

Evans Head, New South Wales, Australia

Evans Head sewage treatment plant (STP) is an intermittently decanted extended aeration (IDEA) plant with a capacity of 5,500 EP (1.3 ML/day dry weather flows) and was commissioned in 2008. The plant has the capability to double its capacity in the future. Currently, effluent is discharged to Salty Lagoon, but due to environmental concerns, alternative long-term disposal options need to be investigated. Alternative disposal options include discharge at the mouth of the Evans River, discharge to constructed wetlands, or continuing disposal to Salty Lagoon.

Richmond Valley Council has asked HydroScience to take part in this investigation by determining the inflow to the STP, the balancing and storage capacity available before overflow to Salty Lagoon, and the transfer capacity. As the quantity of effluent to be disposed of is critical to the Evans River disposal option, it is necessary to confirm the STP inflow characteristics, and the relationships between inflow, rainfall and tidal influences, if any. This will be used as the design criteria for downstream balancing, storage and transfer requirements for all of the disposal options.

In order to determine the inflow to the STP, the collection system and the area it services are analysed to identify the average and maximum flows to be balanced. Specific relevance for the analysis includes rainfall data, seasonal loading and tourist impacts, shallow water table, and growth projections.

Once the inflows are verified, the existing infrastructure of the STP is analysed to determine the effectiveness of balancing the incoming and outgoing flows. If it is found the existing facilities are not adequate for achieving the effluent disposal scheme (primarily for the Evans River discharge option), HydroScience will propose recommendations that will consist of a combination of larger storage and pumping capacities.

Project Overview

Highlights

- ❖ IDEA Treatment Plant
- ❖ 5,500 EP, 1.3 ML/day
- ❖ STP Inflow and Outflow Balancing Analysis
- ❖ Analysis of existing infrastructure
- ❖ Effective management of effluent disposal

Details

Completion Date: Jan 2010

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