

## **Framework for Coastal Discharge Assessment**

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### **Abstract**

When a new wastewater treatment plant is to be constructed or an existing treatment plant is to be upgraded in a coastal city, a number of main design questions arise concerning the system: What level of treatment (e.g. primary, advanced primary, secondary/biological, advanced nutrient removal) should the new/upgrade plant have? What sort of outfall should there be (e.g. simple pipe or multiport diffuser)? Where should the outfall be located (distance from shore, depth)? The Framework for Coastal Discharge Assessment, as described in this paper, is a PC-based system designed to support in the decision making process. It provides a structured approach for assessing the wastewater management options, consisting of a set of linked ‘steps’ to be followed. It contains background information and data on various aspects of wastewater characteristics, wastewater treatment, outfalls and water quality criteria, and provides the possibility for performing screening calculations for near-field and far-field pollutant dispersal, as well as an initial costing calculation. All results are assimilated into a predefined report format, which can be further edited to result in a ‘bankable’ report describing all relevant aspects of a coastal outfall.