

HIGHER TECHNICAL INSTITUTE

MECHANICAL ENGINEERING DEPARTMENT

DIPLOMA PROJECT

WATER MANAGEMENT IN INDUSTRY

M / 825

BY: MOUSKI EVANTHIA

JULY 1998

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MECHANICAL ENGINEERING  
DEPARTMENT**

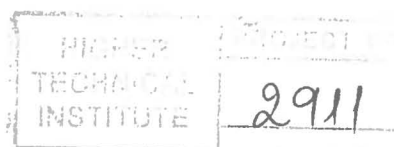
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**MOUSKI EVANTHIA**

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# **WATER MANAGEMENT IN AN INDUSTRY**

**By**

**Evanthia Mouski**

**Project Report**

**Submitted to**

**the department of Mechanical Engineering of the Higher  
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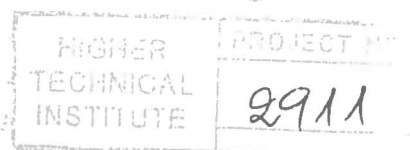
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4. Meteorological Service and especially Mr. Klitos Peyiotis.

## SUMMARY

This project deals with water management in an industry, i.e. The REGIS MILK INDUSTRY.

The purpose is to study, examine and suggest possible strategies and methods for water conservation in the industry, giving first an introduction to the importance of water as a unique substance for all life on Earth, its sources availability, demand-supply and shortages including its importance in the development of civilization.

In Chapter 1 a brief description of the specific industry is given. How it is organised, Administration. Ice-Cream and Yogurt Departments, as well as the processes to the final products.

Chapter 2 deals with the water supplies and how water is used describing the sewage system and how effluents are disposed off.

Water consumption pattern is dealt in the following Chapter 3.

In Chapter 4 areas of possible water conservation and water conservation methods and strategies in the said industry are examined, strategies and methods are proposed.

Chapter 5 examines and describes in detail the main systems selected for water conservation.

Finally, an economic feasibility study is presented in Chapter 6.

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## INTRODUCTION

Water is a necessity - a must in nowadays life. It can be considered as the most important raw material of civilization, since without it man cannot live and industry cannot operate. This project deals with water as a substance of primary importance and considers methods of water conservation.

People are great rearrangers of the earth. Water which is almost the only compound to occur naturally on the earth's surface as liquid, thus the attributes of technological living as washing machines, dish washers etc. place further demands on water resources.

A Person requires a minimum of about 5l/day of potable water for drinking and cooking purposes. The concept of water as a natural resource is essential as growing populations and industrial developments demand ever-increasing supplies of water. The provision of piped water supplies and the consequent need for water carriage of wastes sharply increases the water requirements.

During all the ages large cities have been concerned with their water supplies. Even the important ancient cities soon found that the local sources of supply-shallow wells, springs and brooks-were inadequate to meet the very modest sanitary demands of the day.

These impending shortages have focussed attention on the general field of water resources and their conservation.

Every year, however the growing demands on water and the inevitable increases in discharges of sewage and industrial wastes pose new problems which must be solved to ensure the continued supply of a safe and wholesome water and environment. New methods of analysis and treatment, multi-purpose schemes and new sources of water have to be developed to keep abreast with new and toxic wastes produced.