INTRODUCTION

The increase in population, urbanization, and expansion of industrial areas has generated a need for more effective runoff management throughout Massachusetts. To evaluate the water resources of the Commonwealth, detailed studies of water resources, water flow, and water pollution were conducted. This site was chosen for resource development due to its location along the major drainage network of the Massachusetts River, which drains into the Chesapeake Bay. Consequently, the basin is located in the New England region and is classified as a modified humid stratified region with a complex structure (Ferencz, 1966). The basin has an average annual rainfall of 47.5 inches and a mean temperature of 13.5°F. The basin is also home to several cities, including Boston, which has a population of over one million.

The basin is characterized by its high density of population and its proximity to major highways and transportation networks. As a result, the basin is subject to a variety of natural and human-induced stresses, including pollution, urbanization, and development. These stresses have led to a decrease in the quality of water resources and a decrease in the basin's natural resources. As a result, there is a need for improved water management practices to ensure the sustainability of the basin's water resources.

The basin is also home to several water bodies, including ponds, lakes, and rivers. These water bodies serve as important sources of water for urban and rural areas. However, the basin is also subject to a variety of water-related issues, including pollution, drought, and flooding. These issues have led to a decrease in the quality of water resources and a decrease in the basin's natural resources. As a result, there is a need for improved water management practices to ensure the sustainability of the basin's water resources.

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