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Environment, Environmental Study

Sustainable Planning Challenge

Introduction

Sustainable planning is a vital component in preserving the prosperity and health in urban areas. As the world continues to urbanize, harmonizing the increasing growth in demand for natural resources, energy, and living area becomes a challenge because of its impact in the liveliness of the environment, economy, and policy. In this essay, we will discuss the sustainable planning challenge that the city of Tampa Bay, Florida has been experiencing. We will also discuss the estimated population growth in this city for the next decades. We will learn their best practices in dealing with the challenge in sustainable planning.

Tampa bay, Florida deals with different and new challenges as it approaches the 21st century. In the next 10 to 20 years, around 92, 000 additional people will live in Tampa and 132, 000 more people will attain employment in this city. It is a major challenge to build houses for new residents and the company for new employees. The city does not have enough vacant land to do this. There are is small number of options left for the city to take over raw, new land. For the first time in the city's history, Tampa's future will be consumed by redevelopment of the vacant built city (planhillsborough. org). Meeting water supply adequacy for Tampa's present population that continues to grow each week is a challenge that has currently drawn much attention. In the past century, the enduring thirst for water in most areas in Tampa Bay city resulted to political issues, which were called, " water wars." Definitely, this is issue is not exclusive to Florida, but the challenge became more evident and progresses on a broader state. The Florida council issued

some recommendations to its goal addressees of state business and political leaders. These recommendations are, creating a Water Supply Commission to ensure the sufficiency of water and a sustainable environment of the state’s increasing population, setting up a Water Data Center to secure water information and making the data more broadly accessible to the public, establishing a Science Advisory Council, encouraging partnerships, especially the ones that involve representatives of the private and public sectors, to assist in solving water storage and distribution challenges, distinguishing the practical aspects of distribution system in the entire state to supply water for the state’s rising population and to ensure the protection of the environment.

In the current distribution of water withdrawals in Tampa, it is shown that agriculture is accountable for a much larger proportion of the consumed withdrawals. The demands in water supply are expected to rise because of the continuous growth of all parts of the Florida economy and connected population. Dynamic efforts are in progress to manage this demand by a range of water conservation methods.

The Florida Department of Environmental Protection or DEP organizes water conservation practices in the entire state. The Florida Water Conservation Initiative established several recommendations to reduce demands. The primary recommendations are agricultural irrigation, landscape irrigation, water pricing, industrial, institutional and commercial certification, indoor water consumption, and recycle of reclaimed water. Some groups have projected the cost of supplying water from outside and groundwater sources or decreasing withdrawals by various demand management methods.

Ground water is the biggest source of water and is reasonably expensive with costs in the scope from $0. 50 to 0. 34/100 liters. Other sources that may be used as substitute such as surface water and saline ground water are much more expensive because of the extra treatment costs and much limited availability. Conservation is one of the options to supply expansion. Reducing the demand of outdoor water is highly effective to cut costs because consumers have a tendency to overwater and can simply reduce this demand. On the other hand, unit costs in conservation of indoor water differ more extensively. Therefore, the management has different methods of conservation for indoor water. Retrofitting toilets is the mainly cost-effective investment because new toilets use significantly less water, and new they can greatly eliminate or reduce leaks if flawless toilets are mounted. Water suppliers use various financial encouragements including the benefit of having the utility pay the full cost for the retrofit. Desalination is currently being used more often in Tampa since its cost has decreased. The water resources challenge in Tampa Bay has had a diversified history. The original patterns of water flow were changed during the past century, for functions such as drainage and flood control, navigation, and water supply. Presently, many changes and restoration projects thrive in Florida. The most extensive and most expensive restoration projects include treatment of the Kissimmee River waterway, and the renovation of the Florida Everglades. In the beginning of the 20th century, south Florida hydrological alterations were made. The Southern and Central Florida Project for flood management and water supply was a substantial undertaking to transfer water throughout the south Florida system and involved pumping stations and flood

management structures. Researchers indicated that the normal water flow was detached from its chronological patterns to obtain social goals that included protecting the rising population from storm caused flooding and increasing water supply for urban and agricultural areas. The nature’s needs have been integrated into planning of water resources. Currently, redirecting supply of fresh water to the Everglades, Tampa Bay and canals and rivers that drain into creeks on both coasts is the most vital task. The underlying water planning in south Florida is named the Comprehensive Everglades Restoration Plan or CERP. This program has more than 60 dynamic areas or also called “ elements” whose culmination in the later several decades will most likely result in the costs of over $10 billion.

The benefits of CERP include decreasing weakening loss of water that is stored by using Aquifer Storage Recovery or ASR and letting Lake Okeechobee to practice a further natural hydroperiod. In addition to water flow restoring to be similar to their historical pattern, several efforts are established to decrease the water pollution challenge in the Everglades. Eliminating phosphorus from waters present in the Everglades Agricultural Area, Lake Okeechobee, and developed southeast Florida has directed to the construction of established wetlands in systems described as storm water treatment areas. Reduction in the entire phosphorus levels in the system has already been reported. However, levels still surpass the new requirement in some locations. In is still unclear if this goal is precisely achievable. Though this goal is technically possible, it may not be very effective in reducing costs because these large amounts of money could be used up in other things that

would be more advantageous to the Everglades such as reducing other pollutants, or supplying a better flow management (Delfino & Heany, 2004).

Conclusion

Sustainable planning is a very important factor in maintaining a healthy environment in urban areas. In the city of Tampa Bay, several organizations continue seeking ways to resolve the sustainable planning challenge in their area. The best management practices that was attained, and I recommend as well are the sustainability methods in the Everglades ecosystem because these methods include project for flood management, and increasing supply of water to sustain the growing population of the city.

References

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