

# Preface

Water has been considered as the most precious commodity on earth since the beginning of human civilizations. It holds a special place in Islamic tradition as it is considered to be the source of life and the medium through which humans cleanse their bodies and souls before prayer.

In arid areas such as the UAE and the rest of the Arabian Peninsula, water has played a central role in the culture, as it determined where human settlements would establish their trading routes and animal grazing grounds.

Today, UAE, as with the rest of the GCC countries is almost totally dependent on the desalination of sea water to produce fresh water which is brought to consumers, often over a network of pipes that extend for hundreds of kilometers. Although the effort and pain of securing fresh water for daily requirements have disappeared, with it has come the complete dependency and reliance of the government to provide desalinated and reconstituted water at a cost that exceeds the cost of any water in the world.

As the population expands and the demand for water rises, the ability to expand to meet the growing need by building additional desalination plants become more difficult not only due to the costs involved but also for the impact such plants will have on the environment. Desalination creates a double impact, both in terms of consuming energy and thus the release of carbon dioxide as well as the release of warm and salty effluents that contain the byproducts of disinfection into the ocean thereby harming our fisheries and the marine environment.

In our analysis for the water supply and demand, we have learned that perhaps as high as 40% of the produced water is unaccounted for. Some of that may be attributed to illegal connections which are being addressed by the installation of more water meters. However, leakage, breakage and failure of

materials are also a major cause of the loss of such a high percentage of the produced water. Factors that contribute further to this loss include poor quality of materials, poor designs of internal water supply networks and substandard performance by contractors.

With a view to learn from the experience of other governments worldwide, we were impressed with the efforts made by the Orange County in California to cope with their problem of meeting demands for high quality water and ensuring a secure supply to its constituency. Orange County had sought assistance from the International Association of Plumbing and Mechanical Officials (IAMPO), an organization with over 80 years of experience in providing guidance to governments and industries for the protection of public health and safety.

The EAD contracted IAMPO to develop a plumbing code for Abu Dhabi built along the lines of the principles from the Orange County Plumbing Code that can serve as a guidebook and manual for selection of materials, design of networks, quality of workmanship of water supplies and the waste water collection systems inside buildings.

The code is hoped to enhance the efforts of government officials and contractors in providing our society with a safe, reliable, as well as an efficient water supply and sanitation system for our homes, government, commercial buildings and to the industries.

On a final note, May I emphasize that Codes and manuals alone cannot solve the problem of water loss in our water distribution and waste collection systems. It takes dedication, hard work and perseverance on our part as government agencies and public servants in addition to the commitment we can acquire from our contractors to produce the quality of workmanship worthy of admiration by our people.