Manual of Water Supply Practices

M69

Inland Desalination and Concentrate Management

American Water Works Association

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Preface

With population and economic growth stressing global freshwater supplies, desalination of brackish water and the appropriate management and disposal of concentrate are increasingly attractive options. In the past few decades, the number and capacity of US municipal desalination plants increased rapidly. More than one-third of these facilities are in inland areas. Many concentrate management and disposal options were proven at these facilities, including surface water discharge, discharge to sewer, deep-well injection, land application, discharge to evaporation ponds, near-zero liquid discharge, and zero liquid discharge.

Because of rapid growth, the need for a manual is urgent. The industry has accumulated enough knowledge and experience to provide guidance. After several years of diligent coordination, the AWWA Water Desalting Committee proudly presents AWWA Manual M69, *Inland Desalination and Concentrate Management*.

This manual provides technical and planning guidance for inland water utilities (public and private) that are operating, developing, or considering brackish water desalination. It presents practical information on inland desalination, concentrate treatment technologies and management strategies, permitting procedures, environmental impacts, costs, safety, and more.

The concentrate management topic of this manual is also relevant to direct and indirect potable reuse practices where nanofiltration and reverse osmosis might be utilized. It can also apply to produced water treatment, industrial ultrapure water system brine management, and cooling water blowdown management.

Charlie (Qun) He
Chair
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