

# Strategies of American Water Management

such schemes need large-scale planning. But will the planners be able to take into account all the consequences and foresee the far-reaching ecological and social changes involved? G. W. Thomas and T. W. Box state that "we cannot point to a single example of good advance planning involving the entire scientific community. Furthermore, large-scale transfer of water may in time cause a profound change in the water relationship, resulting in a considerable increase of water salinity at the terminus of the line. The existing Colorado River scheme is cited as an example."

Some papers (S. Resnick's especially) deal with such alternatives to large-scale water transfer as desalination of sea water, water harvesting, a dual or possibly even triple supply system ("water hierarchy," D. A. Okun), reuse of waste water, and increasing irrigation efficiency. There are more alternatives than those mentioned. Much wasting of water could be avoided (Israel is a good example) by installing new types of faucets, by educating people to be water-conscious, and by irrigating at night and not at noon of a burning hot day, for example. But in contrast to the gigantic water-transfer schemes which entice most people so much because they seem to be the magic solution of all water problems, these alternatives—though in my opinion most effective—are unspectacular and need the "courage of the small deeds," and that is not very popular. Two possibilities need special comment. The conventional treatment of waste water for reuse as drinking water is inadequate because water so treated may and often does contain dangerous viruses (D. A. Okun); more research is needed to solve that problem. Increasing the efficiency of irrigation and water use is in my opinion one of the most urgent needs. This could save considerable amounts of water. For instance, in Israel at least 30 percent of irrigation water is wasted. To use on Texas ranges 200,000 kilograms of waste for the production of 1 kilogram of beef (G. W. Thomas and T. W. Box) seems also to be an avoidable waste.

Taken as a whole, *Arid Lands in Perspective* is, like *Deserts of the World*, indispensable for everybody who has to deal with arid lands and their development. One feels that most of the authors have lived the problems they deal with and do not talk merely ex cathedra. Their judgment is sound

and based on vast knowledge of the areas concerned. I hope that the editors will continue to publish similar volumes—as they promise to do—of an equally high standard. There is very little to criticize. The paper on quantitative analysis of desert topography is possibly out of place in such a volume since it is too specialized. The paper on the new system of soil classification consists either of too much repetition because it throws a whole new nomenclature of orders, suborders, and great groups (Vertisols, Alfisols, Ustisols, Ustorthents, and the like) at the reader without giving sufficient explanation for most of us who are still thinking in the old terms of soil classification. It would also be most advisable in a scientific book to use the decimal system and to do away with miles, yards, inches, acre feet, and Fahrenheit.

MICHAEL EVENARI  
*Department of Botany,  
Hebrew University of Jerusalem,  
Jerusalem, Israel*

## Deciding about Water

*Strategies of American Water Management.* GILBERT F. WHITE. University of Michigan Press, Ann Arbor, 1969. xvi + 160 pp., illus. \$5.95.

The theme of this volume, Gilbert White says in his preface, "is that by examining how people make their choices in managing water from place to place and time to time we can deepen our understanding of the process of water management, and thereby aid in finding more suitable ends and means of manipulating the natural water system."

The model of decision making that he offers is new. It is not that of engineering-economics relative to the optimization of the use of resources, or of political science examining the political processes of decision, or of sociology studying "community organization and process relating to the formation and support of agencies making decisions about water management." Instead, social institutions are taken to be the instruments of water resource management. They are seen as affecting the freedom and incentives of their managers and also as affecting managerial perception with respect to (i) range of choice, (ii) water resources, (iii) technology, (iv) economic efficiency, and (v) spatial linkages (such as ecological effects). All five factors are seen as

"being profoundly influenced by the culture of the area and as manipulated by the organization and character of social guides."

Within this framework White identifies and assesses six strategies of water resource management: (i) single-purpose construction by private managers; (ii) in farm water supply; (iii) single-purpose public construction by public managers; (iv) multiple or too much purpose construction by public managers; (v) single-purpose action by public agencies using multiple means; (vi) single-purpose action using multiple means where research is included as a conscious management tool, as in weather modification; and (vii) merging of multiple purposes and multiple means, greatly enlarging the span of possible action. Who makes what choices? What their effect upon the public welfare? What is their effect upon the natural environment? These questions are asked of each of the six strategies. Fully adequate answers are not presented. The inadequacy is partly due, as the author notes, to the imperfection of econometric and ecological analytical methods in determining effects. It is also due, notes, to the fact that few attempts have been made to apply the available methods to the appraisal of complex works, so that he is forced to be "largely speculative in drawing conclusions of evidence." Nevertheless, his comprehensive examination (which he presented originally as the William Cook Lectures on American Institutions at the University of Michigan) provides us with a very valuable benchmark.

Few others, if any, are so well equipped as Gilbert White to undertake this appraisal. A geographer, he served since the 1930's on national planning and advisory boards and committees and has been closely associated with water and related resources matters to know what has been going on, yet in a position to maintain perspective and to avoid comments to particular programs. Drawn upon knowledge derived from these social involvements, as well as his wide-ranging intellectual inquiries as a professor of geography at the University of Chicago, White discusses many specific matters of significance thoughtfully, sensitively, and with historical insight. Some readers will be disappointed that he avoids conventional judgments, pro or con, with respect to Western irrigation and navigation developments. Others will agree

SCIENCE, VOL.

Strategies of American Water Management. Gilbert F. White. University of Michigan Press, Ann Arbor, xvi + pp., illus. \$ See allHide authors and.Ruth Patrick, "Strategies of American Water Management. Gilbert F. White," The Quarterly Review of Biology 46, no. 3 (Sep., ): Strategies of American Water Management [Gilbert White] on miamibusinesslist.com \* FREE\* shipping on qualifying offers.Strategies of American Water Management [Gilbert F. White] on miamibusinesslist.com \* FREE\* shipping on qualifying offers.Summer Strategies of American Water Management, by. Gilbert F. White. Jack L. Knetsch. This Book Review is brought to you for free and open access by .miamibusinesslist.com: Strategies of American Water Management: The management of America's water resources in recognized as a vital national issue, here the.Safety isn't just a priority, strategy, or goal at American Water; those things can pay your bill online, set up emergency notifications, and manage your account.An Integrated water management strategy should have robust stakeholder engagement, including minority groups, women, and low income groups.More than 17 U.S. government agencies and departments contributed to the At a national level, water is often viewed as a strategic resource with national.VISION. A better world through better water. MISSION. Providing solutions to effectively manage water, the world's most important resource. CORE PRINCIPLES.Water Management, Conservation, and Reuse in the Western United States The second section focuses on water quality and describes the strategies that have . Beginning about , the U.S. Congress passed a series of water pollution.FIG 6 Western Water Adaptive Strategies & 6th World Water Forum (American Society of Civil EngineersEnvironmental and Water Resource Institute).A successful water management program starts with a comprehensive strategic plan. The process for developing a strategic plan is generally the same for an.Strategies of American water management / [by] Gilbert F. White. Author. White, Gilbert F. (Gilbert Fowler), Published. Ann Arbor: University of Michigan.State of the Water Industry. provide data and analyses to support water professionals as they develop strategies For over a century, North America's water industry, which includes potable water, SOTWI RESOURCES in Journal AWWA.Erik Peterson of the Center for Strategic and International Studies sums up the . For example, the American Water Works Resources Association through their.The America's Water initiative is building a network of academic institutions, or strategic planning process for the management of this crucial resource at the.Strategies of American water management. Printer-friendly version PDF version. Author: Gilbert F. White. Shelve Mark: ML TD W Location: JKML.Hubert Fleming, Head, Water Management. Date: Marginal cost of water management is rising ANGLO AMERICAN WATER STRATEGY.patterns, new energy supply strategies, growing income inequality, and the . American Water Resources Association, Washington Section. Atlanta Regional.

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