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**THEORETICAL AND APPLIED ECONOMICS OF
WATER DEMAND MANAGEMENT: ALL
DRESSED UP AND NOWHERE TO GO**

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ABSTRACT

Economists have advocated efficient use of water resources through the demand management tool of marginal cost (including opportunity cost) pricing policies for several decades, using increasingly sophisticated models to point out the welfare gains of this policies. More recently, water markets have become *de rigueur* in many articles, books and texts as a way to “automatically” include both delivery and opportunity costs.

A review of the experience in both the developed and developing world, however, suggests that the adoption of these policies has been infrequent at best, particularly for irrigated agriculture. The objective of this paper is to review existing demand management activities in many countries, including the U.S., and to try to provide some understanding of the failure of water management agencies to employ these tools.

Water subsidies for agricultural water are found in many developed countries, such as the United States, and widely among developing countries, even when water is in critically short supply. Most papers and reports describing the application of marginal cost pricing and/or water markets, the same few references appear over and over (Chile, Israel, and Australia, for example). Many authors suggest that the reason for the widespread absence of full marginal cost pricing and/or water markets lies in the rent seeking behavior of current beneficiaries and the inertia in water management systems.

While these barriers are important, technical and institutional difficulties also play a critical role, especially in irrigated agriculture. Based on examples from many countries, it is clear that water measurement at the user level does not exist and that it will be costly to implement and maintain, reducing the ability of managers to apply efficient pricing. Moreover, creating water (use) rights also requires some form of water control and measurement at the user level. For systems with many very small farmers, the problem is multiplied substantially. Institutional barriers also are difficult to overcome. Some of these barriers, such as reluctant administrations and powerful lobbies, reflect, at least in part, the kind of rent-seeking and inertia economists (and others) often point out. Some involve the economic reality of long-term leasehold interest and consequent large losses of investment value. Some are related to institutions other than those for water, such as insecure and/or fragmented land tenure. Still others are cultural and social, and represent a broad consensus of society, rather than specific beneficiary groups. The many examples of the institutional and technical difficulties suggest that as demand management increasingly becomes the rhetoric of water economists, and the water

management community in general, finding workable solutions to the those problems is absolutely essential if efficient water pricing and water markets are to be implemented.