

Total water management: from vision to execution

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Abstract. While the media is focused on global climate change, drought, pollution, and flooding, a quiet revolution is occurring within the ranks of leaders in water supply, wastewater, and water management agencies. In particular, drinking water utilities are positioned to lead in development of ecologically sustainable water management practices. Working through their industry group, the American Water Works Association, utility leaders have developed “Total Water Management” as a framework for principles and practices of sustainable water resources management. It is similar to the concept of “Integrated Water Resources Management,” but has important differences. As a systemic concept, Total Water Management embodies natural water systems management, a concept from the sustainability movement called Triple Bottom Line reporting, and corporate social responsibility. Its core principles are based on sustainable management of renewable resources within natural water systems to balance decisions about water so that all interests are served. The paper will outline the principles of Total Water Management, relate them to current hydrologic and engineering practices, and make recommendations for hydrology education to be more closely aligned with industry practices. It will include results of a January 2008 water industry workshop which seeks to identify priority research related to climate change impacts on water, wastewater and urban stormwater systems.

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