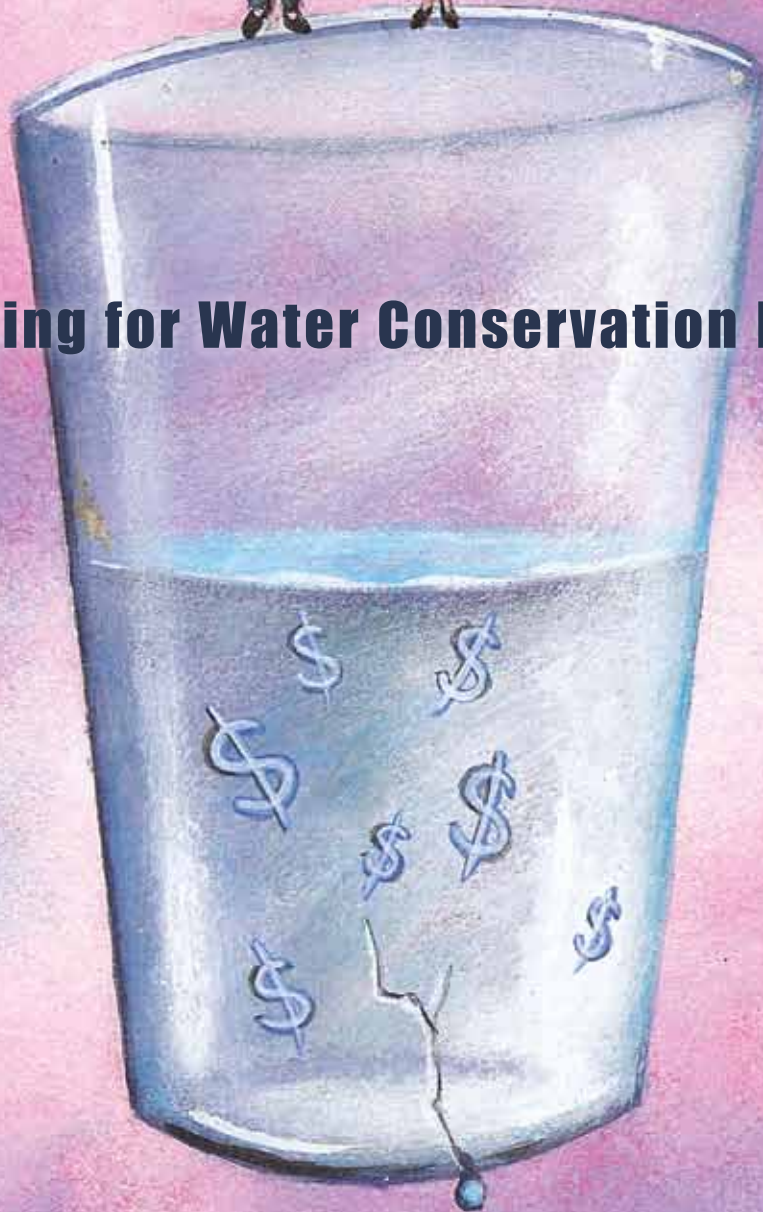




# Debt Funding for Water Conservation Programs



BY ED HARRINGTON  
AND CYNTHIA KOEHLER



Large-scale conservation programs should be considered — and funded — like any other major asset that provides long-term benefits. This article explains how Governmental Accounting Standards Board (GASB) standards allow water agencies to debt fund these programs.

Drought, aging infrastructure, growth, changing standards — these are the issues local water and wastewater agencies deal with all the time. In the past, the response was to sink deeper wells, build dams, or increase the size of pumps and pipes. Those solutions don't always work anymore, however; our groundwater is overdrafted and the best dam sites were developed long ago. Even if such solutions were viable, they are no longer the most efficient way to get the job done.

The cheapest and quickest way to provide water security for cities and towns is to use less “grey” infrastructure and concentrate on conservation, efficiency, and green infrastructure. But those solutions can be hard to implement on a large scale. Sometimes it is because engineers are more comfortable knowing what will happen with pumps and pipes. But often it is because we can't figure out ways to fund large investments in things that don't look like the assets we used to build.

Many water agencies are effectively dealing with water shortages or growth in their service areas by creating “new” water out of already-developed supplies.<sup>1</sup> For example, a number of agencies have “turf buy-back” programs that will pay customers to replace their lawns with low-water-use landscaping. Others are starting major programs to provide efficient washing machine, toilet, and greywater reuse system rebates. Others are providing property owners and developers with incentives to install stormwater capture systems. Each of these actions creates mini-reservoirs that collectively provide substantial public benefits to local water utilities and their ratepayers.

To really make a difference, these programs need to be larger than what can usually be funded through an agency's operating budget without an unwelcome large increase in rates. That is why it is so important to consider how to use debt funding as part of the capital program, allowing the costs to be spread over the life of the benefits.

Some might question whether encouraging citizens not to have lawns or to buy efficient washing machines creates the types of assets that can be recorded and acquired using bond funds. However, GASB rules allow for more than one way to make this happen. This article will explain the issues and offer solutions.

## LOOKING AT WATER SYSTEMS

Local municipal water utilities account for approximately 85 percent of urban water infrastructure spending.<sup>2</sup> California's drought and water issues have put enormous pressure on public agencies to find water savings, and studies point to tremendous opportunities for providing increased water security and resilience through unconventional water solutions. These new water supplies are often derived from localized rather than centralized sources, and they are often “distributed” across many properties, unlike conventional water infrastructure that is typically owned by the utility.<sup>3</sup>

“In the aggregate, this distributed infrastructure serves the same purposes as conventional infrastructure: extending the life of water supplies and preventing pollutants from entering waterways.”<sup>4</sup> Put differently, other than scale, there is no meaningful difference between a turf replacement program and a reservoir; both serve to increase the community's water supply reliability.<sup>5</sup> (See Exhibit 1.)

Drought, aging infrastructure, growth, changing standards — these are the issues local water and wastewater agencies deal with all the time.

**Emphasizing Conservation.** There are many environmental reasons to prioritize conservation and efficiency measures rather than other sources of supply. There are also financial reasons. In 2011, the San Francisco (California) Public Utilities Commission was considering various sources of supply options; see Exhibit 2 for the cost comparison it prepared.

The City of Los Angeles, California, produced similar findings with even lower dollar amounts (created by economies of scale). Los Angeles buys most of its water from the Metropolitan Water District of Southern California (Met Water). In a 2015 audit, the Los Angeles city controller found that water purchased from Met Water cost \$923 per acre foot, while Los Angeles's average water conservation program cost \$312 per acre foot.



## Exhibit I: Sustainable Water System Solutions

What are Sustainable Solutions?



**Accounting Options.** How does a local water agency account for these types of programs? One way is for the local water utility to demonstrate that it has the requisite level of control over the resource in compliance with the GASB definition of an “asset” in Concept Statement No. 4. The other way is to meet the requirements of GASB Statement No. 62 that allows for treatment of assets by regulated operations like local water systems.

**Complying with the Asset Definition.** GASB Concepts Statement No. 4, *Elements of Financial Statements*, defines assets as “resources with present service capacity that the government presently controls.” The present capacity of a resource is its ability to enable the government to provide services that in turn enable the government to fulfill its mission.

GASB characterizes control of an asset as the local government’s ability to “determine the nature and manner of use” of the present service capacity embodied in the resource.<sup>6</sup> This means that the government must retain the ability to determine whether to do one of three things:

- Directly use the present service capacity to provide services to citizens.
- Exchange the present service capacity for another asset such as cash.
- Employ the asset in any of the other ways it may provide benefit.<sup>7</sup>

## Exhibit 2: San Francisco Public Utilities Commission Comparison Cost per Acre Foot of Water

Conservation Programs	\$1,100
Groundwater (Wells)	\$1,400 to \$5,000
Desalination (Brackish Water)	\$1,900
Recycled Water Projects	\$3,400 to \$7,600

GASB statements do not require that public utilities own a particular resource outright for it to be included on its books as an asset.<sup>8</sup> Control of the asset is established if the government “possesses the ability to control access to the present service capacity embodied in the asset.”<sup>9</sup> Contractual rights demonstrate the requisite control of present service capacity.<sup>10</sup> Moreover, “different entities may control different rights associated with a single property.”

Different types of distributed water programs will be best suited to different types of control mechanisms, as indicated in Exhibit 3.

**Easement:** An easement is a legally binding non-possessory property interest in another person’s land. Easements represent a very high level of control by the easement holder. They are enforceable property rights, generally recorded as permanent changes to the property deed.

**Contract:** A contract is simply an agreement between two or more parties that creates enforceable obligations. Contracts are entered into every day and the law of contracts pervades most business dealings.

**Lease:** A lease is an agreement between an owner of property and a lessee that conveys the rights of exclusive possession and use of such property in return for rent. A lease of real property creates a relationship of a landlord and tenant, whereas a lease of personal property is simply governed by the laws of contracts discussed above.

**Regulated Operations Treatment.** A separate and entirely distinct approach to asset treatment for distributed water

### Las Vegas Water Smart Landscapes Program

The Southern Nevada Water Authority (SNWA), a large utility serving the Las Vegas area, operates its Water Smart Landscapes Program using restrictive covenants and easements. The program provides cash rebates to participants who convert high-water-use lawns to drought-tolerant landscaping that is consistent with specific requirements.

In exchange, the property owner grants the SNWA a limited easement in the property to ensure that the landscaping is maintained in conformity with the program. These easements restrict only those portions of property where an incentive for landscape conversion was received. The agreement assures the water savings from the project will be sustained in perpetuity, producing a permanent community benefit.

SNWA, which started its Water Smart program in 2000, believes the easements meet the accounting definition of exerting “control” over an asset, so it records these assets and has funded this program with tax-exempt bonds worth \$50 million since 2009. That funding has resulted in 16,000 projects producing more than 2 billion gallons of annual water savings.

systems may be found in GASB Statement No. 62, *Codification of Accounting and Financial Reporting Guidance Contained in Pre-November 30, 1989, FASB and AICPA Pronouncements*,

	Easement	Real Property Lease	Personal Property Lease	Lien	Title	Contract
Water-Efficient Indoor Appliances	Likely	Likely	Likely	Likely	Potentially	Likely
Cash-for-grass, Xeriscape, Permeable Pavement, Green Rooftops, Bioswales, Rain Gardens	Likely	Likely	Likely	Likely	Likely	Likely
Greywater System, Drip Irrigation	Potentially	Potentially	Likely	Likely	Likely	Likely

Legend: ■ Likely ■ Potentially ■ N/A

which addresses the ability of utilities to record regulated assets in their books for incurred costs that might have otherwise been expensed under generally accepted accounting principles (GAAP).<sup>11</sup> These rules apply to regulated utilities, which appear to encompass virtually all public water and wastewater utilities.

An entity must meet the following criteria to use the regulatory asset framework under GASB Statement No. 62 (paragraphs 476 to 500, codified as ASC 980):

- The entity's rates for regulated services must be established by an independent, third-party regulator or by its own governing board.
- The regulated rates must be designed to recover the specific regulated business-type activity's costs of providing the regulated services.
- The rates must be set at levels that will recover the costs and can be charged to and collected from customers.

If the entity meets these qualifications, GASB 62, paragraph 480 states:

Rate actions of a regulator can provide a business-type activity with reasonable assurance of the existence of an asset. A regulated business-type activity should capitalize all or part of an incurred costs that otherwise would be charged to expense if both of the following criteria are met:

Many water agencies are effectively dealing with water shortages or growth in their service areas by creating “new” water out of already-developed supplies.

- a. It is probable that future revenue in an amount at least equal to the capitalized cost will result from inclusion of that cost in allowable costs for rate-making purposes.
- b. Based on available evidence, the future revenue will be provided to permit recovery of the previously incurred cost rather than to provide for expected levels of similar future costs. If the revenue will be provided through an automatic rate-adjustment clause, this criterion requires that the regulator's intent clearly be to permit recovery of previously incurred cost.

Water utilities with rates regulated by city councils, utility governing boards, or state commissions generally meet all three criteria, and therefore may apply GASB 62 where relevant.<sup>12</sup> The key advantage is that where GAAP would otherwise require accountants to expense certain costs, GASB Statement No. 62 allows incurred costs to instead be capitalized as regulatory assets if it is “probable” that they can be recovered from a utility's ratepayers.<sup>13</sup> The rationale behind this provision arises from the financial and regulatory certainty that rate recovery provides. Use of this mechanism can lower the overall cost by moving investments — potentially including those in distributed infrastructure — to the balance sheet, which in turn allows them to be bond-financed.

### Los Angeles Department of Water and Power Cash in Your Lawn Program

The Los Angeles Department of Water and Power (LADWP) has a turf rebate plan managed by the SoCal WaterSmart agency and the Metropolitan Water District of Southern California. The program currently provides \$1.75 for each square foot of turf removed for those who meet the criteria, which includes completely turf, adding plants, and making sure the new surface is water permeable.

To receive and retain the rebate, tax payers must agree to keep their area turf free (for five years for residential properties

and 15 years for commercial ones), but there is no obligation on new owners if the property changes hands during that time.

LADWP considers this program to be part of its regulatory operations and therefore records the costs as an asset and sets rates to recover those costs. LADWP funds the program using tax-exempt bonds. The agency has invested \$60 million in the program and has provided rebates for nearly 10 million square feet of turf in the last five years. It estimates its total savings amounts at 1.8 million gallons of water per year.

## CONCLUSIONS

We all know that we must try different approaches to making the best use of scarce resources. Sometimes there is a sense that traditional accounting rules only allow for traditional engineering solutions, but that is not the case. Armed with this knowledge, water and wastewater agencies throughout the United States can increase their use of more efficient solutions. ■

### Notes

1. The potential here is quite significant; the U.S. Environmental Protection Agency estimates that the average American family of four uses 400 gallons of water per day, and that families and businesses could easily reduce their water consumption by 20 to 30 percent. See “Indoor Water Use in the United States,” *US EPA*, 2016, available at: <https://www3.epa.gov/watersense/pubs/indoor.html>.
2. Sharlene Leurig, Jeremy Brown, “Bond Financing Distributed Water Systems: How to Make Better Use of Our Most Liquid Market for

There are many environmental reasons to prioritize conservation and efficiency measures rather than other sources of supply.

Financing Water Infrastructure,” *Ceres*, August 2014.

3. *Ibid.*
4. *Ibid.*
5. Cynthia Koehler and Peter Yolles, “Like Solar Energy, Use Public Financing to Spur Water Efficiency,” *San Francisco Chronicle*, June 13, 2015.
6. GASB Concept Statement Summary No. 4.
7. *Ibid.*

8. The term *title* is used to refer to the right to or ownership of an asset and is also used to

refer to the evidence of such ownership. *Title* is evidence of legal ownership, although that ownership may be held for the entity’s own benefit or for the benefit of another entity. Generally, holding title to an asset equates to ownership, and the entity that holds title to an asset should report the asset in its financial statements; however, the facts and circumstances of the situation should be considered. There may be instances in which title is held by one entity, yet some rights of ownership are held by another entity.

9. GASB Concept Statement Summary No. 4.

10. *Ibid.* (“Control of the present service capacity embodied in an asset generally arises from *contractual rights* or legal ownership.” [Emphasis added].)

11. Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) 980-10-15-2, September 2011.

12. “Regulatory accounting under GASB 62,” *Baker Tilly Insights*, January 16, 2014.

13. “Guide to Accounting for Utilities and Power Companies,” Price Waterhouse and Cooper, December 2012.



**ED HARRINGTON** was the controller for the City and County of San Francisco, California, and general manager of the San Francisco Public Utilities Commission. He has served on the board and as president of GFOA and on the board of the Financial Accounting Foundation. Harrington is currently the treasurer of Greenpeace International and an advisor to the WaterNow Alliance and Earth Economics. He can be reached at [edhr@cs.com](mailto:edhr@cs.com). **CYNTHIA KOEHLER** is the executive director and co-founder of the WaterNow Alliance. She was the Environmental Defense Fund’s legislative director for California water issues and the legal director for Save San Francisco Bay. She serves on various boards, including the Marin Municipal Water District. Koehler can be reached at [ck@waternow.org](mailto:ck@waternow.org).

*For more information, please contact WaterNow Alliance, [ck@waternow.org](mailto:ck@waternow.org)*