CONSERVATION THROUGH WATER PRICING
Reconciling Constitutional Mandates

Daniel S. Hentschke

Local Governments Navigating the California Constitution
Municipal Law Institute/League of California Cities
California Constitution Center/UC Berkeley School of Law
February 8, 2013
I. INTRODUCTION

Water conservation is a way of life for Californians. Water that people drink also grows our food, generates our power, provides us recreational opportunities, and sustains valuable ecosystems for fish and other wildlife. In our desert state, no one may waste water. Article X, section 2 expresses the statewide policy “that the waste or unreasonable use or unreasonable method of use of water be prevented, and that the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare.” Modern experience shows that water is not a perfectly renewable resource, and the hydrologic cycle is much more complicated than what we learned in elementary school. Providing water to meet the needs of California requires, among other things: a complex system of water rights; statewide, regional, and local water systems; integration of groundwater and surface water resources; development of new water supplies through recycling and direct or indirect potable reuse, storm water capture and reuse, and seawater desalination. Local agency water providers are resource managers charged with responsibility for ensuring a sustainable supply of water for California. Part of that responsibility includes setting rates that appropriately allocate the “full cost” of water, including not only costs of obtaining supply and operating and maintaining a water delivery system, but the cost of sustaining the supply of water from day to day, season to season, year to year, and generation to generation. Local agencies are confronted with the complexity of managing scarce resources in furtherance of the public good in light of ever-changing regulatory requirements, consumer demands, and competing interests.

Article XI, section 9 of the California Constitution authorizes cities and other municipal corporations to operate utilities and to charge fees for doing so. That section provides:

(a) A municipal corporation\(^1\) may establish, purchase, and operate public works to furnish its inhabitants with light, water, power, heat, transportation, or means of communication. It may furnish those services outside its boundaries, except within another municipal corporation which furnishes the same service and does not consent.

(b) Persons or corporations may establish and operate works for supplying those services upon conditions and under regulations that the city may prescribe under its organic law.

\(^1\) The term “municipal corporation” includes general law and charter cities as well as special districts because “in its ordinary sense the term applies to all corporations exercising governmental functions on the local level.” (California Apartment Assn. v. City of Stockton (2000) 80 Cal.App.4th 699, 704; see also, Glenbrook Development Co. v. City of Brea (1976) 253 Cal. App. 2d 267 (county water district is a municipal corporation within the meaning of this provision).)

Public agencies that operate water systems as prudent business owners have historically recovered all costs incurred in providing water to their customers, including the costs of building, maintaining, operating, administering, and improving those systems. (*Hansen v. City of San Buenaventura* (1986) 42 Cal.3d 1172, 1181.) The costs of operating a public water utility include costs for managing and conserving the water and California courts have historically upheld fee structures designed to deter waste, encourage efficiency, and reasonably allocate costs according to increased burdens imposed on the system by those who use water inefficiently. (*Brydon v. East Bay Mun. Utility Dist.* (1994) 24 Cal.App.4th 178; *Carlton Santee Corp. v. Padre Dam Mun. Water Dist.* (1981) 120 Cal.App.3d 14, 20, 26; see *Pajaro Valley Water Management Agency v. Amrhein* (2007) 150 Cal.App.4th 1364, 1390.) Although water rates have historically been grounded on the notion that the fee for service should reflect the cost of providing that service, following the taxpayer’s revolt that began with adoption of the 1978 People’s Initiative to Limit Property Taxation (Proposition 13, adding article XIII A to the California Constitution), these principles have found their way into express constitutional limitations. Nevertheless, until recently, it was settled that water suppliers could implement the conservation mandate of article X, section 2 through rates designed to encourage water conservation by charging a higher price to heavy water users notwithstanding the limitations on taxes imposed by article XIII A. (*Brydon*, *supra.*) With the advent of 1996’s Proposition 218, however, some have suggested that the state constitution now requires local government water suppliers to charge the same unit price to all water users. This article argues that tiered-pricing, commonly known as inclining block-rate pricing, is a constitutionally appropriate means of encouraging conservation and allocating the cost of water supply. Put differently, this article contends that cost-of-service principles may be used to charge those who use water inefficiently a higher price for their water supply than those who use it wisely.

In 2006, the California Supreme Court decided *Bighorn-Desert View Water Agency v. Verjil*, 39 Cal.4th 205, clarifying the application of Proposition 218 to ordinary utility rates by deciding that fees for domestic water service through an existing connection are property related fees subject to Proposition 218.² Five years

---

² In *Bighorn*, the Supreme Court rejected the argument that fees triggered by a voluntary decision of the user to consume water were not property related merely because they were based on consumption. (*Id. at 216 - 217.*) Thus, some charges within a rate structure, such as new service connection charges are not subject to Proposition 218 (*Richmond v. Shasta Community Services Dist.*.)
later, a court of appeal concluded that, “California Constitution, article X, section 2 is not at odds with article XIII D so long as, for example, conservation is attained in a manner that ‘shall not exceed the proportional cost of the service attributable to the parcel.’” (*City of Palmdale v. Palmdale Water Dist.* (2011) 198 Cal. App. 4th 926, 936-937.)

II. The Water Conservation Mandate

The Legislature has implemented the conservation mandate of article X, section 2 through a variety of statutory directives and authorizations, both before and after the adoption of Proposition 218. For example:

- Water Code sections 520 – 529.7 require water meters and recognize that metered water rates are an important conservation tool. (See Wat. C. § 521 (b), (c).)
- Water Code section 370 et seq., was adopted by the Legislature in 2008 following the *Bighorn* decision, to provide additional, alternate authority for public entities to encourage conservation rate structure design. (Wat. C. §§ 370, 374 (b); Stats. 2008, ch. 610 (A.B. 2882).)
- Water Code section 375, subdivision (b) provides that public water suppliers may encourage conservation through “rate structure design.” The bill amending the Water Code to add this authority was adopted during the height of a statewide drought. In an uncodified portion of the bill, the Legislature specifically acknowledged that conservation is an important part of the State’s water policy and that water conservation pricing is a best management practice. (Stats. 1993, c. 313, § 1 (A.B. 1712)).
- Water Code section 1009 provides that water conservation programs are an authorized water supply function for all municipal water providers in the state.
- Water Code section 1011 furthers the water conservation policies of the State by providing that a water appropriator does not lose an appropriative water right because of water conservation programs.

(2004) 32 Cal. 4th 409), but others are, such as charges for on-going water service to an existing account.

3 Although the court of appeal ultimately struck down the rates in that case, it did so on the basis that the disparity between customer classes, and particularly the impact on irrigation users was done, “without a corresponding showing in the record that such impact is justified under California Constitution, article X, section 2, or permissible under article XIII D, section 6.” *Id.* at 937.

4 AB 2882 was drafted to respond to concerns of its sponsoring Orange County water districts that Proposition 218 might adversely affect their conservation based rate structures. See Senate Floor Analysis, [http://www.leginfo.ca.gov/pub/07-08/bill/asm/ab_2851-2900/ab_2882_cfa_20080812_140337_sen_floor.html](http://www.leginfo.ca.gov/pub/07-08/bill/asm/ab_2851-2900/ab_2882_cfa_20080812_140337_sen_floor.html); Assembly Floor Analysis, [http://www.leginfo.ca.gov/pub/07-08/bill/asm/ab_2851-2900/ab_2882_cfa_20080813_195029_asm_floor.html](http://www.leginfo.ca.gov/pub/07-08/bill/asm/ab_2851-2900/ab_2882_cfa_20080813_195029_asm_floor.html).
• Water Code section 10631, subdivision (f), paragraph (1)(K) establishes water conservation pricing as a recognized water demand management measure for purposes of Urban Water Management Plans.

• On November 4, 2009, the Legislature adopted a comprehensive legislative package to improve the State’s water supply reliability. Part of that package, SBX7-7 added Part 2.55 to Division 6 of the Water Code, commencing at section 10608. (Stats. 2009-2010, 7th Ex. Sess., c. 4, § 1.) Sometimes referred to as the “20 x 2020” legislation, it requires the state to achieve a 20 percent reduction in urban per capita water use by December 31, 2020, with incremental progress measured by a 10 percent reduction by December 31, 2015. (Wat. C. § 10608.16.) Urban retail water suppliers are required to determine in their urban water management plans their own targets and methods for achieving this conservation (Wat. C. § 10608.20) and to assess the present and proposed means and methods for achieving the conservation targets (Wat. C. § 10608.36).

• Proposition 204 (adopted by a greater number of votes at the November 1996 election than Proposition 218) acknowledges that the limited water resources of this state must be protected and conserved, and that water conservation is essential to the state’s long-term economic and environmental sustainability. (Wat. C. § 78500.2 (a), (c), (d).)

The Legislature has also vested water districts with broad authority to manage water to furnish a sustained, reliable supply. For example:

• Irrigation Districts have the power to take any act necessary to furnish sufficient water for beneficial uses, and to control water. (Wat. C. § 22075, § 22078.) They have general authority to fix and collect charges for any service of the district. (Wat. C. § 22280.)

• County Water Districts have similar power to take any act necessary to furnish sufficient water (Wat. C. § 31020) and express authority to conserve (Wat. C. § 31021).

• Municipal Water Districts have similarly broad power to control water for beneficial uses (Wat. C. § 71610) and express power to conserve (Wat. C. § 71610.5).

The cost of water includes not only the costs of building, operating and maintaining facilities to produce, transport, store, treat, and deliver water; but also costs of supply, including conservation. Today, water supply agencies are faced with managing water in the face of current drought conditions, climate change, environmental constraints on water supply availability, and statutory and judicial requirements intended to ensure a sustainable water supply. More and more

5 See, e.g., In re Bay Delta Prog. E.I.R. Coordinated Proceedings (2008) 43 Cal. 4th 1143, 1153 – 1161 (Supreme Court discusses history of statewide water supply infrastructure and state and federal
agencies are placing greater emphasis on managing the water resource through rates, thereby ensuring full cost recovery while requiring who use the most to pay the costs of securing and assuring the water supply.

Conservation pricing is not unique to California. For example, the Chicago-based non-profit Alliance for Water Efficiency has written:

Water budget based rate structures are also very effective in promoting conservation, though more difficult to implement. In this design, each residence has an inclining block rate structure designed according to its individual needs. The tiers are usually set based upon the quantity of occupants and the square footage of landscape; known to be the two most significant factors in residential water use. The prices of the tiers increase significantly (greater than 50%) after the base usage tier is established. This rate system requires a robust billing system to accommodate the quantity of individual rate structures (possibly equal to the quantity of customers); and the system requires a formal process to establish each home’s base water usage, and respond to the many customers likely to appeal their base tier allotment. Water budget based rates are not only an effective water conservation strategy; the rate structure is the most equitable means to base rate[s] on needs of each individual household. This rate structure can also be adapted for non-residential customers.6

Similarly, the Municipal Research and Service Center of Washington wrote:

One of the most effective tools for water conservation is the rate structure. Rate structures and practices that promote the efficient use of water should be the goal to ensure sufficient resources to meet competing uses.7

An organization that promotes water stewardship in Colorado, Utah, and New Mexico also writes of the benefits of water conservation pricing structures.8 And a Texas law professor, commenting on the water conservation programs in her state, stated, “Conservation efficiency is a water supply.”9

---

6 This text may be found at www.allianceforwaterefficiency.org/1Column.aspx?id=712.
7 This text may be found at www.mrsc.org/Subjects/Environment/water/wc-measures.aspx#Conspricing.
8 This text may be found at www.westernresourceadvocates.org/water/rates.php.
Many California municipal water providers have established conservation-based pricing of one form or another; for example, 22 of the 24 public agencies (including the City of San Diego) that comprise the San Diego County Water Authority have established pricing structures to encourage water conservation.\textsuperscript{10}

III. Basics of Water Rates

Prudent fiscal management requires public agency water utility enterprises to match revenues to the full cost of service. Revenues from rates and other charges must reflect the actual, reasonable and proportionate cost of serving each customer, without cross-subsidization of some customers at the expense of others. Ratemaking is a zero-sum game\textsuperscript{11} — if the share of an agency’s service costs attributable to one customer class is reduced, those costs must be allocated to other customer classes.

The scope and complexity of water resource management, and correspondingly, the setting of rates to pay for those activities, have been recognized as “unequalled by virtually any other type of activity presented to the courts.” \textit{Brydon v. East Bay Mun. Utility Dist.} (1994) 24 Cal. App. 4th 178, 203 – 204. \textit{Brydon} involved a challenge to a pricing structure designed to conserve water and manage water resources, but other courts have recognized the dilemmas facing local agencies in the management of other resources and in the generation of funds to do so. \textit{(E.g., Carlton Santee Corp. v. Padre Dam Muni. Wat. Dist.} (1981) 120 Cal. App. 3d 14, 28 (court acknowledges the serious dilemma facing a local agency in fairly distributing the cost of limited sewage treatment resources).) Public agencies have a wide variety of rate structures, some bundle their costs into a single volumetric price for water, others have unbundled their rates into a mix of fixed and volumetric charges, some have rates that vary by service area or land use category (e.g., single-

\textsuperscript{10} For example, agencies adopting conservation based fee structures range from large to small, urban to agricultural. All but two of the member agencies served by the San Diego County Water Authority, a public agency providing wholesale water to other public agencies that serve over 3 million people in San Diego County, have conservation-based pricing structures. A small, but representative, list of agencies imposing some form of conservation-based pricing includes: Amador Water Agency; Cities of Big Bear Lake, Colton, Corona, Del Mar, Escondido, Los Angeles, Oceanside, Ontario, Poway, Roseville, San Diego, and Santa Rosa; City and County of San Francisco; Coastside County Water District; Cucamonga Valley Water District; East Bay Municipal Utility District; El Dorado Irrigation District; Irvine Ranch Water District; Helix Water District; Hi-Desert Water District; Lake Hemet Municipal Water District; Lakeside Water District; Mammoth Community Water District; Midway Heights County Water District; Olivenhain Municipal Water District; Otay Water District; Padre Dam Municipal Water District; Rancho California Water District; Sacramento Suburban Water District; Santa Fe Irrigation District; San Dieguito Water District; San Juan Water District; Stinson Beach County Water District; and Sweetwater Authority.

\textsuperscript{11} Zero sum game is defined as “a situation in which a gain by one must be matched by a loss by another.” \textit{(American Heritage College Dictionary} (3rd Ed. 2000).) Of course, when rates are lawfully set, no party really “loses.”
family, multi-family, commercial, institutional) due to differences in service characteristics, others rely on flat system-wide or “postage-stamp” charges.12

Local agencies frequently fund utility operations from a variety of revenue sources, including capacity charges13, connection charges14, standby charges15, investment earnings, tax revenues if the agency has tax authority (or benefits from property taxes because it had tax authority prior to the adoption of Proposition 13 in 1978), as well as rate revenue. Under the American Water works Association’s M-1 manual, the industry standard guide to water rate-making, the portion of an agency’s required revenue to provide safe, adequate and lawful service (the so-called “revenue requirement”) that must be satisfied by rates is determined by:

1. taking total budgeted costs of the enterprise operation (operating and maintenance expenses, debt service, capital needs to be funded on a pay-as-you-go basis, changes in reserves, etc.),
2. deducting the revenue expected to be generated by other sources such as investment income, taxes, standby charges, and capacity charges, then
3. spreading the rest of the revenue over the amount of service or volume of commodity expected to be sold for the relevant rate period. 16

12 See e.g. Bighorn, supra, 39 Cal. 4th 205, 217 (fixed monthly charge as well as volumetric water rate for on-going water service are “property related” and therefore subject to Proposition 218); Palmdale, supra, 198 Cal. App. 4th 926, 934 (rate structure imposed differing rates on differing classes of service intended to encourage conservation); Paland v. Brooktrails Township Community Services Dist. Bd. of Directors (2009) 179 Cal. App. 4th 1358 (“Paland”) (rates included fixed monthly charge and volumetric usage charges). “Postage-stamp” rates refer to flat-per-unit fees. (Rincon Del Diablo Municipal Water Dist. v. San Diego County Water Authority (2004) 121 Cal. App. 4th 813, 816.) The term reflects the fact that the U.S. Mail changes a flat fee per ounce to post a letter across town or across the country,

13 A capacity charge or fee is a charge used to accumulate capital to provide capital facilities necessary to provide ongoing utility service. (San Marcos Water Dist. v. San Marcos Unified Sch. Dist. (1986) 42 Cal.3d 154 (characterizing capacity charges for purposes of local governmental immunity from property taxes).)

14 A connection charge is a one-time fee imposed for the establishment of a new service connection to a parcel or customer. Such charges are not subject to Proposition 218. (Richmond v. Shasta Community Services District (2004) 32 Cal.4th 409.) They are, however, subject to Proposition 26. (Cal. Const. art. XIII C, § 1, subd. (e)(1) – (2).)

15 A standby charge is a charge imposed on property to recover the cost of facilities necessary to make service available to that property on demand. (Gov’t Code §§ 54984 et seq. (Uniform Standby Charge Procedures Act). Under Proposition 218, a standby charge must be approved as an assessment. (Cal. Const. art. XIII D, § 6 (b)(4).)

16 The California Supreme Court described this process as follows: “Revenue requirements are allocated to various classes [of customers] based on each group’s proportionate use of the system, including use of physical plant facilities and consumption of water, among other elements. A preliminary step in determining revenue requirements is the establishment of appropriate classes among which costs will be allocated. The next step is to calculate the costs which properly should be assessed each group. For this analysis, two alternative methods exist: the cash basis and the utility basis. Very generally, the cash method sets revenue requirements based on actual operating and maintenance expenses plus allowable charges for system replacement, debt principal repayment, and
To ensure sufficient revenues and to avoid rate-spikes or “rate shock” (either up or down), obtain access to the bond market (which demands reserves to ensure repayment), meet bond covenants (i.e., contractual promises to lenders to impose rates sufficient to ensure repayment of debt), and guard against unforeseen circumstances and risks (such as regulatory change, drought, earthquake, labor unrest, etc.), public agencies must establish reserve accounts, while also ensuring that all their bills can be paid when due. Moreover, setting water rates also includes predicting the weather because water use (and revenues) rise in dry weather and fall in wet seasons.

The Legislature has deemed it necessary to mandate that local governments set rates sufficient to meet revenue requirements to avoid inefficient and non-beneficial use of California’s limited water resources and the harm to the public health and safety that results from under-funded public water systems. This is most often done in the context of statutes governing special districts. Some examples include:

- Water Code section 31007 (county water districts)
- Water Code section 43006 (water storage districts)
- Water Code section 71616 (municipal water districts)
- Public Utility Code section 12809 (municipal utility districts); and
- Public Utility Code section 16467 (public utility districts).

The Legislature’s policy also applies to cities and counties operating under general laws. For example, the Revenue Bond Law of 1941, applicable to the water, sewer, solid waste and other enterprises of many local agencies, including cities and counties, expresses the Legislature’s policy that public agency enterprises be operated efficiently, economically and in good repair and working order, (Gov’t Code §§ 54513, 54516), at the lowest cost consistent with sound economy, prudent management and security of bond holders (Gov’t Code § 54514), and that the rates and consumer charges be set at levels sufficient to pay debt service, meet bond covenants, and pay current maintenance and operation expenses and other obligations. (Gov’t Code § 54515.)

Public agencies that run their water system as prudent business owners have historically recovered all costs incurred in providing water to their customers, including the costs of building, maintaining, operating, administering, and improving that system. Although limited in the post-Proposition 218 era to such non-218 fees as those for parks and airports, *Hansen v. City of San Buenaventura*

---

other capital costs. The utility method also considers actual operating and maintenance expenses, but instead of looking to cash expenses such as system replacement and debt principal repayment, the method focuses on depreciation attributable to outside use and on rate of return on investment.” *(Hansen v. City of San Buenaventura (1986) 42 Cal.3d 1172, 1181.)*
(1986) 42 Cal.3d 1172, 1181, establishes the unsurprising principle that the rates must satisfy the revenue requirement of a public water service. Post-Proposition 218 cases acknowledge this principle as well. (Howard Jarvis Taxpayers Assn. v. City of Fresno (2005) 127 Cal. App. 4th 914, 922 (“Cities are still entitled to recover all of their costs for utility services through user fees.”); Howard Jarvis Taxpayers Assn. v. City of Roseville (2002) 97 Cal. App. 4th 637, 647-648.) However, the courts in Roseville and Fresno held that Proposition 218 precluded agencies from relying on Hansen to support the diversion of revenue from property related fees governed by Proposition 218 to purposes unrelated to enterprise activities. But, otherwise, the substantive cost-of-service law is consistent both before and after Proposition 218.

III. Constitutional Cost of Service Principles

Proposition 218, adopted by the voters in November 1996, added articles XIII C and XIII D to the California Constitution and, among other things, expressly incorporated cost of service standards for a new class of “property related fees and charges,” defined by article XIII D, section 2(e). Proposition 218 is best understood as further limitation on government’s imposition of taxes that began with the adoption of Proposition 13 in 1978. (Silicon Valley Taxpayers’ Assn., Inc. v. Santa Clara County Open Space Authority (2008) 44 Cal. 4th 431, 442 – 443.) In addition to establishing new substantive requirements for the property related fees within its scope (Cal. Const., art. XIII D, § 6, subd. (b)), it expressly shifted to agencies the burden to demonstrate the lawfulness of challenged fees. (Cal. Const., art. XIII D, § 6, subd. (b) (5).) Proposition 26 does the same as to the fees to which it applies. (Cal. Const., art. XIII C, §1, subd. (e) (final, unnumbered paragraph).)

17 Article XIII C was further amended by Proposition 26 adopted in November 2010. Among other things, Proposition 26 added a new definition of “tax.” (Cal. Const. art. XIII C, § 1, subd. (e).) This new definition includes “any levy, charge, or exaction of any kind imposed by a local government” except those falling within one or more of seven express exemptions. (See Cal. Const. art. XIII C, § 1, subd. (e) (1) - (7).) Among these are two based on cost-of-service principles ((e) (1) and (2), one based on cost of regulation principles ((e)(3), one incorporating cost -of-service principles from other law (6), and one exempting property related fees set in accordance with article XIII D ((e)(7).

18 As noted by the Supreme Court, article XIII D provides a single definition that includes both “fee” and “charge,” and the terms appear to be synonymous for the purposes of Proposition 218. (Bighorn-Desert View Water Agency v. Verjil (2006) 39 Cal. 4th 205, 214, fn. 4.) In this brief, the word “fee” is used. In this paper, the word “rate” is used as a synonym for the fee for water service, while the term “rate structure” refers to the design, and various components, of revenue collection measures a public agency may employ to fund its water service enterprise and which may include fees subject to article XIII D.

19 Proposition 26 contains a more general articulation of the cost of service principle and includes a requirement that the local government bear the burden of proof that “a levy, charge, or other exaction is not a tax, that the amount is no more than necessary to recover the reasonable costs of the government activity, and that the manner in which those costs are allocated to a payor bear a
Article XIII D’s five substantive limitations on property related fees are:

1. Fee revenues cannot exceed the funds required to provide the service (revenue requirement limitation) (§ 6, subd. (b)(1));

2. Fee revenues cannot be used for any purposes other than that for which the fee is imposed (use limitation) (§ 6, subd. (b)(2));

3. The amount of the fee imposed on a parcel or person as an incident of property ownership cannot exceed the proportional cost of service attributable to the parcel (cost-of-service apportionment limitation) (§ 6, subd. (b)(3));

4. Fees may be imposed only for service actually used by, or immediately available to, the owner of the property (service limitation) and charges for the availability of future service, such as standby fees must be imposed by the assessment procedures of article XIII D, section 4 (§ 6, subd. (b)(4));

5. Fees may not be imposed for general governmental services where the service is available to the public at large in substantially the same manner as it is to property owners (general purpose limitation) (§ 6, subd. (b)(5)).

These substantive limitations are best viewed as a constitutional mandate of general cost-of-service principles applicable to local government rate setting to the specific context of the property related fees defined by Proposition 218. These requirements and particularly the requirement that fees not exceed the proportional cost of service attributable to a user, reinforce the principle that cost-of-service pricing precludes subsidy of one rate payer at the expense of another (referred to in rate-making jargon as a “cross-subsidy”). Thus, when determining the portion of system costs to borne by one class of customer, local agency officials...
must be reasonably assured that a class of ratepayers is neither bearing costs that should be borne by another class nor receiving a subsidy paid by another customer class. This is accomplished through a process that includes all of the rates and charges evaluated together in a comprehensive cost-of-service analysis.

Properly justified through a cost-of-service analysis, conservation-based pricing is consistent with the substantive requirements of article XIII D, section 6(b). By setting rates that encourage conservation, including the rates at issue in this case, water managers make each water user responsible for using water wisely and for paying the increased costs associated with burdens excess water use places on a water supply and delivery system as a whole. In 1994, the Court of Appeal recognized this principle and rejected a challenge to a conservation-based water fee known as an “inclining block rate” on the ground that it constituted a special tax adopted without the voter approval required by California Constitution article XIII A, section 4 (Proposition 13). In 1994, the Court of Appeal wrote:

Moreover, in the present context the constitutional mandate of water conservation contained in article X, section 2 of the California Constitution is at least as compelling as the objectives of article XIII A, section 4. Indeed, even if article XIII A, section 4, is applicable to the instant rate structure, we agree with [the] San Diego Gas & Electric Co. [v. San Diego County Air Pollution Control Dist. (1988) 203 Cal. App. 3d 1132] court that shifting the costs of environmental degradation from the general public to those most responsible is consistent with the objectives of Proposition 13. The inclining block rate structure is a reasonable reflection of the fact that it is in part the profligate usage of water which compels the initiation of regulated conservation measures including those public education programs designed to encourage conservation. Intuitively, it can be seen that such measures are necessitated predominately by those citizens least inclined toward conservation. In our view, it is reasonable to allocate rate costs based on the premise that the more unreasonable the water use, “the greater the regulatory job of the district.”


There is nothing in Proposition 218 suggesting that the voters intended its new requirements for property related fees to avoid the Constitutional mandate for water conservation expressed in article X, section 2. (Cf. Citizens Assn. of Sunset

---

20 An inclining block rate structure imposes higher charges per unit of water as the level of consumption increases. (Brydon v. East Bay Mun. Utility Dist. (1994) 24 Cal.App.4th 178, 184.)

21 Indeed, the approval of Proposition 204 on the same 1996 ballot demonstrates the voters’ understanding of the importance of water conservation in California. (See page 10, infra.) Where Proposition 218’s framers saw fit to deviate from other provisions of our Constitution, they did so expressly. Art. XIII C, § 3 (partially overriding art. II, §§ 8, 9). Thus, there is no reason to assume
When interpreting the Constitution, courts seek to harmonize its provisions to avoid conflict and avoid implied repeal of a provision. (Cal. Bldg. Industry Assn. v. Governing Bd. of the Newhall Sch. Dist. (1988) 206 Cal. App. 3d 212, 229.) Just as the Brydon court harmonized the mandate of article X, section 2 with the Proposition 13’s prohibition of the imposition of special taxes without voter approval, the twin goals of conservation and limiting fees to proportional cost of service under Proposition 218 can accommodate one another. This principle was confirmed by the court in Palmdale, although the particular tiered rate structure was found to be unjustified by the facts of that case. (City of Palmdale v. Palmdale Water Dist. (2011) 198 Cal. App. 4th 926, 936-937.)

Because conservation accomplishes a supply function by reducing (regulating) demand, public agencies may also look for guidance to precedent regarding regulatory fees in applying the substantive requirements of Proposition 218 to a water rate structure designed to encourage conservation. Under a conservation-based rate structure, water users have some control over when, and if, they pay the charges and the amount of the charge they must pay. They can modify their conduct to consume less water and avoid higher fees. (California Building Industry Assn. v. San Joaquin Valley Air Pollution Control Dist. (2009) 178 Cal. App. 4th 120, 132 (fee to fund mitigation of air quality impacts of development was a valid regulatory fee because proportionate to each developer’s contributions to those impacts); Brydon v. East Bay Mun. Utility Dist., supra, 24 Cal.App.4th at 194.) It is, of course, the very purpose of such regulatory fees to send a “price signal.”

In the context of a Proposition 13 challenge to a regulatory fee, the California Supreme Court has recently reiterated that, “The question of proportionality is not measured on an individual basis. Rather, it is measured collectively, considering all rate payors.” (Cal. Farm Bureau Fed., et al. v. State Water Res. Control Bd. (2011) 51 Cal. 4th 421, 438.) Thus, agencies are allowed to employ a flexible assessment of proportionality within a range of reasonableness in setting fees. (Id.; California Building Industry Assn. v. San Joaquin Valley Air Pollution Control Dist., 178

its framers intended an implied partial repeal of article X, section 2. Implied partial repeal is disfavored in any event. See, e.g., City and County of San Francisco v. County of San Mateo (1995) 10 Cal.4th 554, 563; Serrano v. Priest (1971) 5 Cal.3d 584, 596; Board of Supervisors v. Lonergan (1980) 27 Cal.3d 855, 868.

22 “A price signal is a message sent to consumers and producers in the form of a price charged for a commodity; this is seen as indicating a signal for producers to increase supplies and/or consumers to reduce demand.” http://en.wikipedia.org/wiki/Price_signal (viewed 2/18/11).
Cal.App.4th at 132.) Thus, application of the proportionality requirement of article XIII D, section 6 (b)(4) focuses on parcels generally and does not require parcel-by-parcel rate setting. (See Paland v. Brooktrails Township Community Services Dist. Bd. of Directors (2009) 179 Cal. App. 4th 1358, 1370 (court refused to look at individual property owner activity to determine whether service was “immediately available” as required for a fee under article XIII D, section 6(b)(4).)\textsuperscript{23} Moreover, the language of section 6(b)(3) also indicates that some legislative discretion in this aspect of rate-making remains: “The amount of a fee or charge imposed upon any parcel or person as an incident of property ownership shall not exceed the proportional cost of the service \textbf{attributable to the parcel}.” As showing in the next section, assigning a higher share of the cost of service to those who use water inefficiently seems an appropriate “attribution” in light of the constitutional mandate of article X, section 2 to prevent water waste.

\textbf{IV. An example of how it can be done.}

The following PowerPoint slides are a portion of a presentation made at the ACWA Spring Conference 2012 by John Farnkopf, P.E., a rate setting and cost-of-service expert, and are used with permission of Mr. Farnkopf.\textsuperscript{24}

\textsuperscript{23} The \textit{Cal. Farm Bureau} analysis has also been applied in the context of Proposition 26. (Griffith v. City of Santa Cruz (2012) 207 Cal. App. 4th 982, 997.)

\textsuperscript{24} The author acknowledges and thanks John Farnkopf, Senior Vice President, HF&H Consultants, LLC, Suite 230, 201 North Civic Drive, Walnut Creek, CA 94596, and Michael G. Colantuono, Colantuono & Levin, PC, 11364 Pleasant Valley Road, Penn Valley, CA 95946 for their review and comment on this paper.
TIERED VOLUMETRIC RATE DESIGN
Example standards
Volumetric rate design guidelines

- Confirm that the customer classes are properly defined
- Identify each class’ proportionate share of the volumetric revenue requirements
- Determine the type of rate structure for each class
  - E.g., uniform, tiered, seasonal
- Derive rates for each structure
  - Demonstrate that revenue from rate structure equals the cost of service for that customer class
- Confirm that rate-making objectives were met
- Show the math; provide the details; summarize the results
  - Complexity is the enemy of understanding
Usage characteristics and corresponding costs

Economies of scale do not occur when resources are scarce

<table>
<thead>
<tr>
<th>Indoor use</th>
<th>Essential use</th>
<th>Average</th>
<th>Above average</th>
<th>Unusually high</th>
<th>Unreasonably high</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outdoor use</td>
<td>Minimal</td>
<td>Sustainable</td>
<td>Above average</td>
<td>Excessive</td>
<td>Wasteful</td>
</tr>
<tr>
<td>Peaking</td>
<td>Minimal</td>
<td>Moderate</td>
<td>Within peaking limits</td>
<td>At peak design limits</td>
<td>Stressful demand</td>
</tr>
<tr>
<td>Rationing potential</td>
<td>None</td>
<td>Least reduction</td>
<td>Average reduction</td>
<td>High reduction</td>
<td>Penalties/restrictions</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cost Distribution</th>
<th>Base cost</th>
<th>Average cost</th>
<th>Peak cost</th>
<th>Premium</th>
<th>Unsustainable</th>
</tr>
</thead>
</table>

- Short-term emergency supplies
- Long-term supply expansion projects
- More costly supplies - recycled water, desalination
- Peak Capacity
- Conservation Programs
- More costly supplies - imported purchased water
- Least costly supplies - local surface and groundwater
- Average day peak capacity

Efficiency is less expensive

Inefficiency is more expensive

Source: HF&H Consultants, LLC. All rights reserved
# Example design standards

Four-tier default structure
Can add a fifth tier by subdividing Tier 4
Can drop to three tiers by merging Tiers 3 and 4

<table>
<thead>
<tr>
<th>Four-Tier Structure</th>
<th>Tier 1</th>
<th>Tier 2</th>
<th>Tier 3</th>
<th>Tier 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efficiency</td>
<td>High</td>
<td>Average</td>
<td>Low</td>
<td>Inefficient</td>
</tr>
<tr>
<td>Price signal</td>
<td>Reward</td>
<td>Neutral</td>
<td>Warning</td>
<td>Deter</td>
</tr>
<tr>
<td>Breakpoints</td>
<td>Up to median winter (Minimum 50 gpcpd)</td>
<td>Up to median summer</td>
<td>Up to 85% of bills</td>
<td>Highest 15% of bills</td>
</tr>
<tr>
<td>Bill Distribution</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within tier</td>
<td>40%</td>
<td>30%</td>
<td>15%</td>
<td>15%</td>
</tr>
<tr>
<td>Cumulative</td>
<td>35% to 45% (Almost half)</td>
<td>65% to 75% (Up to two thirds)</td>
<td>80% to 85% (Beginning of highest third)</td>
<td>100% (Highest seventh)</td>
</tr>
<tr>
<td>Water Distribution</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within tier</td>
<td>15%</td>
<td>30%</td>
<td>20%</td>
<td>35%</td>
</tr>
<tr>
<td>Cumulative</td>
<td>10% to 20% (Lowest seventh)</td>
<td>40% to 50% (Up to half)</td>
<td>60% to 70% (Up to two thirds)</td>
<td>100% (Highest third)</td>
</tr>
<tr>
<td>Pricing Per Tier</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compared to avg cost</td>
<td>0.70</td>
<td>1.00</td>
<td>Approx 1.50</td>
<td>Approx 2.00</td>
</tr>
<tr>
<td>Compared to Tier 1</td>
<td>1.00</td>
<td>1.43</td>
<td>Approx 2.00</td>
<td>At least 2.50</td>
</tr>
<tr>
<td>Incremental step</td>
<td>0.00</td>
<td>0.43</td>
<td>0.57</td>
<td>0.50</td>
</tr>
</tbody>
</table>
Breakpoint locations

- Tier 1 Breakpoint - 10 HCF
  - 35% of total bills
  - 10% of total water

- Tier 2 Breakpoint - 20 HCF
  - 67% of total bills
  - 40% of total water

- Median Use
  - 15 HCF

- Median Winter
  - 10 HCF
Pricing per tier

Charging less for low use is balanced by charging more for high use.

The prices for each tier multiplied times the associated water in each tier cannot exceed the total volumetric revenue requirement for each class or the cost of service is violated.

Show the math.
Using bills to test proportionality

The cumulative impact of increasing block rates on bills does not exceed the average cost until demand enters Tier 4. All use through Tier 3 yields bills that are below the average cost.
Proportionate or not?

• Tier 1 customers pay 75% of average cost
  – Slightly more than the fixed costs for minimal peaking
• Tier 2 customers pay 87% of average cost
  – Less than average cost for median summer irrigation
• Tier 3 customers pay 102% of average cost
  – For use up to 150% of median summer
• Tier 4 customers pay more than the average cost in proportion to their excessive use
  – The cost of service within the class is maintained
• Ultimately, proportionality is in the eye of the beholder
Water budget rates

• Water budget rates are a form of tiered rates
  – Same principle applies
    • Rates need to be based on each class’ revenue requirements and demand characteristics

• Breakpoints are fractions and multiples of budgets for billing period
  – Typical design locates top tier at +200% of allotment

• Water budgets can vary by class
  – Residential: inside and irrigation needs
  – Non-residential: recent historical use

• Heavier burden of proof than fixed tier structures
  – Individualized tiered structures creates complicated analysis
  – Show the math
Don’t forget customer bill design

• Sophisticated rate designs are wasted by uninformative customer bill formats
  – Customer bills are communication opportunities

• Customer bills should provide details that will aid customer understanding
  – Show how the bill is calculated charge by charge, tier by tier
  – Provide details on how the customer compares with prior use and similar customers