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Net Blue Toolkit To Help Communities Pursue Water-Neutral Growth

Alliance for Water Efficiency, Environmental Law Institute, and River Network Propose a Practical Path to Connect Land Use and Water Resources through Water Demand Offsets

As population growth increases pressure on finite water supplies, the Alliance for Water Efficiency, Environmental Law Institute, and River Network recently launched the Net Blue Ordinance Toolkit to help communities pursue sustainable development without increasing overall water demands.

Water managers in 40 out of 50 states anticipate water shortages within the coming years, according to a 2013 Government Accountability Office survey. Communities in some water-stressed areas already face limits to their development caused by insufficient water supplies.

“Communities urgently need to address the disconnect between land use decisions and water resources if they are to enjoy continued population and economic growth,” said Mary Ann Dickinson, President and CEO, Alliance for Water Efficiency. “Water managers, planners, and developers must come together to think about growth differently. Net Blue makes it easier to connect these dots, with community-vetted tools, a standardized methodology, and a clear process for pursuing successful water-neutral growth.”

Water-neutral growth ordinances can either require or incentivize residential and commercial developments to offset their projected additional water demand through water-efficient retrofits of existing development. Offset measures such as fixture and appliance replacements, rainwater harvesting and storm water capture, can allow development without increasing the overall water demand. Water efficiency stretches existing supplies, decreases the need for new infrastructure, and preserves water for fish, wildlife, and recreation.

“Net Blue is an important piece of the puzzle for local communities to help keep more water in their rivers for fishing, swimming, and other needs,” said Nicole Silk, President, River Network. “Although Net Blue may not automatically translate into more water for our rivers, it is one important tool to reduce demand for highly treated water, taking some pressure off of our waterways and groundwater resources.”

The Toolkit is designed to help communities facing diverse challenges to find the solution that best matches their water supply situation, governance structures, and conservation opportunities. The Model Ordinance Worksheet guides users through the development of a water-offset ordinance tailored to their political climate, legal framework, and environmental conditions. The Offset Methodology Workbook helps evaluate and select strategies to offset the projected new potable water use.

“Municipalities, counties, and utilities across the country have been addressing water supply challenges in innovative ways,” said Adam Schempp, Senior Attorney, Environmental Law Institute. “Through this collaborative project, we have tried to make one of those approaches easier to develop, and thoughtfully, in many different circumstances.”

More than a dozen communities have implemented a water demand offset policy to help enable new construction that likely would have been prohibited due to supply constraints, according to a 2015 report from the Alliance for Water Efficiency entitled *Water Offset Policies for Water-Neutral Community Growth*.

“Santa Fe has had a tremendous response over the past 20 years to several water offset conservation programs,” said Kyle Harwood, Net Blue Advisor and Partner, Egolf + Ferlic + Harwood. “These programs, with the support of Santa Fe residents, have allowed for increased economic prosperity and increased water resource resiliency. I urge anyone interested in this topic to review the Net Blue materials as they contain the practical experience of implementation from Santa Fe and other communities around the country.”

The Net Blue Ordinance Toolkit was created with the input of a Project Advisory Committee composed of experts in water resources, water law, and planning and zoning. Partner communities across the country, including Acton, Mass.; San Francisco, Calif.; Albuquerque, N.M.; Austin, Texas; Cobb County, Ga.; Madison, Wis.; and Bozeman, Mont., provided input to ensure adaptability in areas with diverse political climates, legal frameworks, and environmental challenges.

“Metropolitan Atlanta has experienced explosive growth and is an area of the country anticipated to continue to grow,” said Kathy Nguyen, Senior Project Manager at Cobb County Water System. “The area did not grow around rich water resources. Net Blue provides a tool for communities in metropolitan Atlanta to continue to grow, but to allow that growth to happen within the limits of our water resources.”

The Net Blue Ordinance Toolkit and additional resources can be accessed at www.net-blue.org.

SOURCE: Alliance for Water Efficiency



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REPORT: Water Demand Offset Programs Offer a Path to Sustainable Community Development

Net Blue Initiative Will Help Communities Pursue Water-Neutral Growth

2015-01-27

CHICAGO, Ill. (January 26, 2015) - Amidst growing demands on water resources, water demand offset and water-neutral growth programs show promise as an effective way for communities to support sustainable growth, according to a new report released today by the Alliance for Water Efficiency (AWE).

As the U.S. population continues to grow and urbanize, planners and decision makers are becoming increasingly challenged with the task of accommodating new water customers with existing and possibly limited water supplies. Nearly 40 out of 50 states are experiencing or anticipating water shortages in the next decade, creating potential challenges for growing communities and industrial centers in both arid and traditionally water-rich regions.[1]

"Communities need to reevaluate traditional planning approaches if they are to support increasing population and economic expansion in the coming years – particularly in areas with high growth and stressed water supplies," said Mary Ann Dickinson, President and CEO of the Alliance for Water Efficiency. "Innovative strategies and new land use planning tools that consider and address natural resource constraints can help communities to thrive and become more resilient to potential climate-related impacts."

AWE's report, *Water Offset Policies for Water-Neutral Community Growth*, reviewed 13 communities throughout the United States that currently have a water demand offset policy or water neutral growth policy in place. These policies require offsetting the projected water demand of new development with water efficiency measures to create a "Net Zero" or neutral impact on overall service area demands and water use. The report found that the most common scenario where this has been applied entails issuing building permits for development that requires offset of the new water use through both on-site water efficiency measures and replacement of inefficient fixtures in pre-existing facilities. In numerous California communities and in cities ranging from Santa Fe, New Mexico to Sharon, Massachusetts, water demand offset programs have been utilized to help enable new construction that likely would have been prohibited due to supply constraints.

"We examined communities in which water demand offset programs have been applied and found that they seem to be effective, but that this is not a widely implemented practice," said Bill Christiansen, Program Manager at the Alliance for Water Efficiency. "We believe one barrier is the lack of a standard approach to determine how much water a specific action will save. A clear methodology for calculating savings would help communities more easily adopt a water demand offset strategy and ensure success."

To guide more communities to utilize these strategies, AWE has partnered with the Environmental Law Institute and River Network to launch Net Blue, a new initiative aiming to offer a practical path to sustainable community development. The



three organizations are developing a model ordinance template, including a consistent and industry-approved methodology for calculating offsets to ensure desired water savings, which communities can tailor to create a water demand offset approach that meets their needs.

AWE's report also revealed what components are necessary for a successful and sustainable ordinance or policy. This includes not only a methodology for estimating savings of eligible efficiency measures, but also a water demand offset requirement in proportion to projected demand, mechanisms to verify implementation of efficiency measures, and polices to ensure demand reductions are permanent.



"The Net Blue effort will help cities such as San Francisco that must balance growth projections with limited water supplies," said Paula Kehoe, Director of Water Resources of the San Francisco Public Utilities Commission. "A customizable ordinance, based on best practices and developed by water and land use experts is a valuable and timely resource."

The project will preview the ordinances in communities in different regions throughout North America to develop the ordinance components and to ensure it is adaptable in communities with diverse political climates, legal frameworks and environmental challenges. The project partners are seeking additional pilot/partner communities to participate.

Further information on the Net Blue initiative and the full *Water Offset Policies for Water-Neutral Community Growth* report are available [here](#).

About the Alliance for Water Efficiency

The Alliance for Water Efficiency (AWE) is a nonprofit organization dedicated to the efficient and sustainable use of water in North America. Working with more than 400 water suppliers, business and industry, regulatory and advocacy organizations, AWE delivers innovative tools and training to encourage cost-effective water conservation programs, cutting-edge research, and policy options necessary for a sustainable water future. For more information, visit AWE's website, like AWE on Facebook, join the discussion on LinkedIn and follow AWE on Twitter @A4WE.

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[1]U.S. Government Accountability Office. (2014). *FRESHWATER: Supply Concerns Continue, and Uncertainties Complicate Planning*. (<http://www.gao.gov/products/GAO-14-430>)

- AWE Net Blue Webpage: Supporting Water-Neutral Community Growth
- AWE report, Water Offset Policies for Water-Neutral Community Growth

Ordinances Referenced in Developing the Net Blue Ordinance Worksheet

Cities

- Lompoc, California
 - Municipal Code title 13, ch. 4, § 70 – Development Project Impact on Water Supply
- Morro Bay, California
 - Municipal Code title 13, ch. 20 – Building Limitation
 - City Council Resolution 32-14
- Napa, California
 - Municipal Code title 13, ch. 9, § 10 – New Development and Remodels
- San Diego, California
 - Municipal Code ch. 6, art. 7, div. 38 – Emergency Water Regulations
- Santa Fe, New Mexico
 - Municipal Code ch. 14, art. 8 & ch. 25, art. 9-12
- Santa Monica, California
 - City Charter art. 7, ch. 16, § 50 – Water Consumption Limits and Fees for New Development
- St. Helena, California
 - Municipal Code title 13, ch. 12 – Water Use Efficiency and Use Guidelines

Counties

- Monterey County, California
 - County Code title 18, ch. 44-50
- San Luis Obispo County, California
 - County Code title 22, ch. 94 – North County Planning Area
 - County Code title 26 – Growth Management Ordinance
 - County Ordinance No. 3246

Utilities

- Cambria Community Services District in California
 - District Code title 4, ch. 20 – Water Conservation and Retrofit Program
- Soquel Creek Water District in California
 - Board of Directors Resolution No. 03-31

Other

- Dungeness River Watershed in Washington State
 - WASH. ADMIN. CODE § 173-518

Demand Offsets: Water Neutral Development in California

Jennifer L. Harder*

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I. INTRODUCTION

Urban water use efficiency is lauded as the best source of “new” water for drought-prone California.¹ Recurring droughts have energized the state’s search for improved urban efficiency, starting with the severe drought of 1976–1977, which is credited with sparking a trend of legal, policy, and technical innovation that continues today.² As a result of these innovations, studies demonstrate that some cities are decreasing per capita consumption and using less water, despite growing populations.³ Water use efficiency has been touted as one of the most promising, and least expensive, sources of water for California.⁴

Programs that require “water neutral development,” often referred to as “demand offset programs,”⁵ are one of the innovations inspired by drought.⁶

1. See, e.g., PAC. INST. & NATURAL RES. DEF. COUNCIL, URBAN WATER CONSERVATION AND EFFICIENCY POTENTIAL IN CALIFORNIA (June 2014), available at <http://pacinst.org/wp-content/uploads/sites/21/2014/06/ca-water-urban.pdf> (urban efficiency measures “could reduce urban water use by 2.9 million to 5.2 million acre-feet per year”); ELLEN HANAK ET AL., PUB. POLICY INST. OF CAL., WATER AND THE CALIFORNIA ECONOMY 6 (2012), available at http://wspc.ucr.edu/newsletter_links/PPIC%20Report.pdf (on file with the *McGeorge Law Review*); AQUACRAFT, INC., WATER ENG’G & MGMT, CALIFORNIA SINGLE-FAMILY WATER USE EFFICIENCY STUDY 228 (2011) [hereinafter AQUACRAFT]; PETER G. GLEICK ET AL., PAC. INST., WASTE NOT, WANT NOT: THE POTENTIAL FOR URBAN WATER CONSERVATION IN CALIFORNIA (2003), available at http://www.pacinst.org/wp-content/uploads/sites/21/2013/02/waste_not_want_not_full_report3.pdf (on file with the *McGeorge Law Review*).

2. See, e.g., Jay Lund et al., *California Droughts Precipitate Innovation*, CALIFORNIA WATER BLOG (Jan. 21, 2014), <http://californiawaterblog.com/2014/01/21/california-droughts-precipitate-innovation/> (on file with the *McGeorge Law Review*); Caitlyn S. Dyckman, *Symposium on the 25th Anniversary of the Report of the Governor’s Commission to Review California Water Rights Law Part 1 of 2: A Dynastic Disruption: The Use Efficiency and Conservation Legacy of the Governor’s Commission to Review Water Rights Law Recommendation*, 36 MCGEORGE L. REV. 175, 182 (2005).

3. See, e.g., AQUACRAFT, *supra* note 1, at 230; CAL. DEP’T OF WATER RES., FINAL 20X2020 CONSERVATION PLAN 15 (Feb. 2010), available at http://www.swrcb.ca.gov/water_issues/hot_topics/20x2020/docs/20x2020plan.pdf (on file with the *McGeorge Law Review*) [hereinafter 20X2020 PLAN]; Ellen Hanak, *Is Water Policy Limiting Residential Growth? Evidence from California*, *Land Economics*, 43 J. OF THE AM. WATER RESOURCES ASS’N, 5 (2007), reprinted in CAL. WATER PLAN UPDATE, *Reference Guide* (2009) [hereinafter *Is Water Policy Limiting Residential Growth?*].

4. CAL. DEP’T OF WATER RES., CALIFORNIA WATER PLAN UPDATE 2013 v.3 3-5, 3-9 to 3-26 (2013) [hereinafter 2013 DWR WATER PLAN UPDATE] (describing potential water savings by sector and concluding that efficiency could reduce potable water demand by more than 2 million acre-feet per year); HEATHER COOLEY, KRISTINA DONNELLY & NEWSHA AJAMI, PAC. INST., ENERGIZING WATER EFFICIENCY IN CALIFORNIA: APPLYING ENERGY EFFICIENCY STRATEGIES TO WATER, 19–20 (Dec. 2013), available at <http://pacinst.org/wp-content/uploads/2013/12/energizing-water-efficiency-pacinst.pdf> (on file with the *McGeorge Law Review*); WATER AND THE CALIFORNIA ECONOMY, *supra* note 1, at 6 (“There is still considerable room for cost-effective urban water savings, which can help offset demands from anticipated population growth.”); *but cf.* Hanak et al., *Myths of California Water - Implications and Reality*, 16 HASTINGS W.-N.W. J. ENV. L. & POL’Y 3, 31–34 (2010) (arguing that the potential for net savings from conservation is often overstated); AQUACRAFT, *supra* note 1, at 230–31 (discussing revenue impacts to water suppliers, and rate increases, resulting from conservation).

5. “Demand offset” is the most common term in California and the western states, where the programs primarily focus on fixture retrofits. This article refers to such programs as “water neutral” to invoke a broader concept than retrofit-only programs. Water neutral programs may also be referenced as a means for reducing “water footprint,” and thus called “zero water footprint.” See Sarah Bates, *Bridging the Governance Gap: Emerging Strategies to Integrate Water and Land Use Planning*, 52 NAT. RESOURCES J. 61, 87 (2012).

These programs require that new development that causes increased water demand to offset such demand through conservation or new supplies, with the goal of ensuring that the new development is “neutral” to the water supplier’s system.⁷ Water neutral programs are reflective of a broader U.S. offset trend, in which the concept is applied in areas such as wastewater, stormwater, and energy.⁸ Offsets are themselves related to a broader “concurrency” movement, in which local governments seek to ensure that growth occurs only where there are available resources over long-term planning periods.⁹

In California, water neutral programs have been adopted primarily in service areas experiencing chronic supply shortages.¹⁰ This raises the question of whether such programs might be useful outside of dire shortages, to help communities develop stronger drought resiliency and to work toward sustainability.¹¹ To help address that question, this article describes water neutral programs in California and reviews key concepts, approaches, costs, and benefits. Part II provides an overview of water neutral programs. Part III samples water neutral programs across California and other jurisdictions, describing individual programs and summarizing key features across these programs. Part IV identifies practical and policy issues and opportunities associated with California water neutral programs. Part V reviews the basic legal framework in which water neutral programs operate. Finally, Part VI suggests considerations for a defensible program, and recommends integration of creative approaches to conservation into water neutral programs, adoption of water neutral programs outside of the drought context, and creation of standardized measurement, monitoring, and reporting regarding water neutral programs. Part VI also recommends creation of

6. See *infra* Part III (describing water neutral programs in California that were initiated in drought years); cf. LLOYD S. DIXON, NANCY Y. MOORE & ELLEN M. PINT, DROUGHT MANAGEMENT POLICIES AND ECONOMIC EFFECTS IN URBAN AREAS OF CALIFORNIA, 1987–1992, at 54 (1996), available at http://www.rand.org/content/dam/rand/pubs/monograph_reports/2007/MR813.pdf (on file with the *McGeorge Law Review*).

7. Various entities provide water for residential, commercial, industrial and agricultural purposes in California, including city and county water departments, special districts, investor-owned utilities, and mutual water companies. Except where distinction is important, this Article refers to these collectively as “water suppliers.”

8. See CNTY. OF SAN LUIS OBISPO, WATER CONSERVATION IMPLEMENTATION PLAN FOR THE LOS OSOS WASTEWATER PROJECT 7 (Oct. 2012), available at www.newtimeslo.com/news/8558/bowl-me-over/ (on file with the *McGeorge Law Review*) [hereinafter SLO COUNTY PLAN FOR LOS OSOS]; ENVTL PROT. AGENCY, PENNSYLVANIA TRADING AND OFFSET PROGRAMS REVIEW OBSERVATIONS (Feb. 17, 2012) (on file with *McGeorge Law Review*); Robert Glennon, Op-Ed., *Is Solar Power Dead in the Water?*, WASH. POST, June 7, 2009, <http://www.washingtonpost.com/wp-dyn/content/article/2009/06/05/AR2009060501988.html> (on file with the *McGeorge Law Review*).

9. See, e.g., Lincoln Davies, *Just a Big, “Hot Fuss”? Assessing the Value of Connecting Suburban Sprawl, Land Use, and Water Rights Through Assured Supply Laws*, 34 *ECOLOGY L.Q.* 1217, 1244–46 (2007); Janet C. Neuman, *Dusting Off the Blueprint for a Dryland Democracy: Incorporating Watershed Integrity and Water Availability Into Land Use Decisions*, 35 *ENVTL. L. RPTR.* 10236, 10253 & n. 173 (Apr. 2005).

10. ELLEN HANAK, PUB. POLICY INST. OF CAL., WATER FOR GROWTH: CALIFORNIA’S NEW FRONTIER, 61–64 (2005), available at http://www.ppic.org/content/pubs/report/R_705EHR.pdf (on file with the *McGeorge Law Review*) [hereinafter WATER FOR GROWTH].

11. *Id.*

a water neutral model ordinance as a tool to help more water suppliers consider and develop new programs. This article concludes that, although water neutral programs may not be appropriate to every jurisdiction, under the right circumstances they can and should play a larger role within the portfolios of California water suppliers.

II. WATER NEUTRAL: AN OVERVIEW

Although water neutral programs take a variety of forms, the core principle is the requirement that new water uses offset their impact to water supplies.¹² In this regard, “new water uses” can include new uses from any source—e.g., individual homes, businesses, institutions, and residential or mixed-use subdivisions—whether those uses are newly initiated or are expansions or additions that result in intensified water use.¹³ This article refers to all of these new sources of water demand as “new development.”

In a water neutral program, new development may follow two steps.¹⁴ In the first step, demand is minimized through on-site water-saving choices.¹⁵ In some programs, the first step may not be expressly required or incentivized, although in others it is mandatory.¹⁶ In the second step, the development facilitates, via a direct undertaking or funding, off-site actions that will increase supply or reduce existing water demand elsewhere in the supplier’s service area, equivalent to at least 100% of the new development’s water demand.¹⁷ The second step is the feature that defines a water neutral program and distinguishes water neutral from other approaches to water efficiency and conservation.

If the new development minimizes demand through on-site choices, those may include indoor measures such as highly efficient fixtures, dual-flush toilets, front-loading washing machines, or hot water on-demand systems.¹⁸ The measures may also include outdoor water saving choices such as sub-metering

12. CHARLOTTE HODDE ET AL., PLANNING & CONSERVATION LEAGUE FOUND., EIGHT AFFORDABLE WATER SOLUTIONS FOR CALIFORNIA 3 (2010), available at <http://www.pcl.org/pdfs/8-Affordable-Water-Solutions.pdf> (on file with the *McGeorge Law Review*).

13. See generally CAL. WATER CODE §10912(a) (West 2011).

14. See Rande Kanouse & Doug Wallace, *Optimizing Land Use and Water Supply Planning: A Path to Sustainability?*, 4 GOLDEN GATE U. ENVTL. L. J. 145, 158 (2010) (detailing the two basic steps for water savings).

15. See Michelle L. Maddaus, William O. Maddaus, Marshall Torre & Richard Harris, *Innovative Water Conservation Supports Sustainable Housing Development*, AM. WATER WORKS ASS’N J. 107 (May 2008) [hereinafter Maddaus et al.].

16. Compare CAMBRIA CMTY. SERVS. DIST., 2010 URBAN WATER MANAGEMENT PLAN 2–23 (2010) [hereinafter CCSD 2010 PLAN] (pointing out that Cambria has included mandatory on-site water saving requirements), with Maddaus et al., *supra* note 15, at 107–08 (indicating the recommended measures for the Alamo Creek approach to maximizing onsite water conservation).

17. See Maddaus et al., *supra* note 15, at 109–11 (outlining the various methods of an offsite mitigation program).

18. *Id.*

for common area irrigation and multi-family/senior housing, xeriscaping and drip irrigation, self-adjusting irrigation controllers in all landscaped areas, and use of recycled water in common areas, parks, and other community outdoor facilities.¹⁹ Depending on cost, regulatory requirements, and other factors, more sophisticated measures such as rainwater cisterns, greywater systems,²⁰ and stormwater capture²¹ may also be included.

After integration of on-site water-saving measures, the new development then offsets remaining demand through offsite action. Offsite actions include the same range of water-saving measures as are available on-site, with the options being controlled by the feasibility of integrating such measures into existing development. In California, the offsite action most often required is retrofit of indoor or outdoor water-using fixtures, typically toilet retrofits.²² Retrofit of older toilets is popular because they present the opportunity to achieve a relatively large volume of savings in a single transaction, with relatively little inconvenience to the homeowner and the water supplier.²³ Other offsite actions may include retrofit of irrigation systems or other agricultural conservation measures, installation of rainwater cisterns or greywater systems, or contribution to stormwater capture, recycled water, or desalination programs.²⁴ Some water

19. E. Bay Mun. Util. Dist., Ensuring Water Neutral Demand in New Developments, Powerpoint Presentation (2011) (on file with the *McGeorge Law Review*) [hereinafter Ensuring Water Neutral Demand Powerpoint]; see Maddaus et al., *supra* note 15, at 107–09; see generally *FlexTrack Option*, CAL. URBAN WATER CONSERVATION COUNCIL (last visited Mar. 31, 2015), <http://www.cuwcc.org/Resources/Memorandum-of-Understanding/Exhibit-1-BMP-Definitions-Schedules-and-Requirements/Flex-Track-Option> (on file with the *McGeorge Law Review*) (describing efficient urban water management practices).

20. See AQUACRAFT, *supra* note 1, at 243, 257 (estimating that a typical family could offset nearly 60% of irrigation demand through an expanded gray water system).

21. See Alf W. Brandt, Moderator at American Bar Association Spring Conference Breakout Session: Stormwater: Regulation to Resource (Mar. 2013); cf. CITY OF L.A. DEP'T OF WATER AND POWER, SECURING LA'S WATER FUTURE 26–27 (2008) (describing program to increase stormwater capture to recharge groundwater).

22. See Part III.A. (describing California water neutral programs); see also *Is Water Policy Limiting Residential Growth?*, *supra* note 3 (indoor plumbing retrofits are the “low hanging fruit” of water conservation); cf. 2013 DWR WATER PLAN UPDATE, *supra* note 4, at 3-16 to -17, 3-21 (2013); CAL. STATE WATER RES. CONTROL BD., DEVELOPMENT OF AN URBAN WATER CONSERVATION REGULATORY PROGRAM (2008), available at http://www.swrcb.ca.gov/water_issues/programs/water_conservation/docs/urban/urban_conservation_workshop_comments_summary_121908.pdf (on file with the *McGeorge Law Review*) (discussing effective activities of retrofitting).

23. See sources cited *supra* note 22 and accompanying text.

24. See BORREGO WATER DIST., POLICY FOR WATER AND SEWER SERVICE TO NEW DEVELOPMENTS (2013); BORREGO WATER DIST., DEMAND OFFSET MITIGATION WATER CREDITS POLICY 5, 10 (2013) [BORREGO DEMAND OFFSET POLICY] (requiring 1:1 offsets for new development through measures such as turf removal and agricultural fallowing to mitigate groundwater overdraft); see also CNTY. OF SAN DIEGO, CNTY. CODE tit. 6, div. 7, § 67.720(A) (2013) (establishing offset requirements for new pumping in Borrego); Maddaus et al., *supra* note 15, at 109; WATER FOR GROWTH, *supra* note 10, at 75; cf. Christine G.K. LaPadola-Breglia, *America's Water Woes*, NEWSREVIEW (Oct. 4, 2012), <http://www.newsreview.com/chico/americas-water-woes/content?oid=7978307> (on file with the *McGeorge Law Review*) (“[A] developer who needs more water would have to pay a farmer who already has his straw in the glass ‘to replace his earthen ditch with a lined canal and use the water saved in the process.’”).

neutral programs allow developers to provide water to the service area, through water transfers or dedication of water rights.²⁵

Water neutral offsets may be required in greater than 1:1 ratios, meaning that the developer must offset more than 100% of the new demand.²⁶ In a 2:1 ratio, for example, a developer must offset two gallons for every gallon of demand created by the new development.²⁷ Ratios greater than 1:1 (“higher offset ratios”) may be designed to accomplish several goals. Higher offset ratios recognize that demand is always an estimate, because weather conditions, human behavior, and other supply factors vary.²⁸ Higher offset ratios also address the fact that water saving fixtures lose efficiency with wear and tear.²⁹ Higher offset ratios help protect against the potential to underestimate future demand or overestimate future supply. Higher ratios also help protect existing supply reliability during drought periods,³⁰ help ensure a net gain to improve degraded water resource conditions,³¹ and create cost equities for existing customers.³²

Water neutral programs provide several types of benefits. Well-designed programs result in tangible water savings,³³ which may provide drought reliability

25. See, e.g., CITY OF VENTURA, AGENDA PACKET, ITEM 17 (June 16, 2014) (Water Dedication and In-Lieu Fee Ordinance and Resolution); see also WATER FOR GROWTH, *supra* note 10, at 75 (describing residential projects in Placer, Riverside and Glendora County that had been proposed to require introduction of new surface water supplies).

26. Krista B. Anderson, Analysis of Water Offset Programs for Implementation in the Ipswich River Watershed, Massachusetts 27–28 (June 2006) (Master of Environmental Management thesis, Yale University), available at http://ipswichriver.org/wp-content/uploads/2012/10/Analysis_of_Water_Offset_Programs.pdf (on file with the *McGeorge Law Review*) (pointing out Weymouth, MA’s heightened requirement of “saving two gallons of water for each gallon requested”).

27. *Id.*

28. Telephone Interview with Bill Maddaus, Maddaus Water Management (Mar. 10, 2014) (notes on file with the *McGeorge Law Review*) [hereinafter Maddaus Interview]; Anderson, *supra* note 26, at 56 (“even a 1:1 ratio cannot guarantee maintenance of the status quo due to the likelihood that not all measures will be implemented, some will not be as effective as anticipated, and estimates of water savings or impact reductions associated with offset activities naturally involve a margin of error”); SOQUEL CREEK WATER DIST., RESOLUTION NO. 03-31 (2003) [hereinafter SCWD RESOLUTION NO. 03-31] (Resolution Establishing A Water Demand Offset Policy for New Development) (“Given that water demand varies and can only be estimated prior to actual usage records, and given that water saving devices lose efficiency over time, it is prudent to require an offset of estimated demand in a ratio somewhat higher than estimated use.”).

29. Maddaus Interview, *supra* note 28; SCWD RESOLUTION NO. 03-31, *supra* note 28.

30. See, e.g., Kanouse & Wallace, *supra* note 14, at 158 (2010).

31. See, e.g., COMMONWEALTH OF MASS., EXEC. OFFICE OF ENERGY & ENVTL. AFFAIRS AND WATER RES. COMM’N, WATER CONSERVATION STANDARDS 43–44 (discussing use of ratios to prevent further deterioration of degraded basins).

32. See Memorandum summarizing key findings from survey of Soquel Creek Water District customers (Apr. 10, 2014), in SOQUEL CREEK WATER DISTRICT, BOARD AGENDA PACKET, at 8 (June 3, 2014), available at http://www.soquelcreekwater.org/sites/default/files/documents/board-meeting/packets/06-03-14_Board_Packet_.pdf (on file with the *McGeorge Law Review*) [hereinafter SCWD Survey Memo].

33. See Memorandum for Soquel Creek Water District Board of Directors on Agenda Item No. 3.2, at 3 (Apr. 29, 2014), in SOQUEL CREEK WATER DISTRICT, BOARD AGENDA PACKET, at 12 (June 3, 2014), available at http://www.soquelcreekwater.org/sites/default/files/documents/board-meeting/packets/06-03-14_Board_Packet_.pdf (on file with the *McGeorge Law Review*) [hereinafter SCWD Agenda Item 3.2 Memo] (demand offset programs accounts for 150 acre-feet per year, equivalent to 600 households); *but cf.* AQUACRAFT, *supra*

and contribute to long-term supply sustainability. In the shortage context, water neutral programs have facilitated economic growth, housing, and jobs that would otherwise be foregone due to moratoriums on new water connections.³⁴ Outside of the shortage context, conservation of supply through offsets contributes to protection of water resources, leaving more water in groundwater aquifers, to combat overdraft or seawater intrusion, and in surface water systems to support instream resources and geomorphic functions.³⁵ Water neutral programs that expressly reduce the development's offset obligation based on water demand create a clearer obligation for development to "pay its own way," and provide an incentive for new development to be water-conservation friendly.³⁶ Water neutral programs shift the burden of accommodating new development from local government and existing customers to the developer and subsequent property owners; although this shift may be controversial, it does provide some benefit to local government and existing customers.³⁷ In one program, a 2013–2014 survey of existing customers demonstrated that awareness of the district's offset program prompted an increase in customer confidence in water supply reliability and support for new development.³⁸ Water neutral programs can also provide a means of bringing conservation to low-income residents that otherwise may not have the ability to implement such water efficiency measures.³⁹ Water neutral programs provide an incentive for the private sector to support and promote new urban efficiency conservation techniques and technology.⁴⁰ Finally, water neutral programs that require water budgets and that track water use help generally to promote quantitative approaches to demand management, which has proven effective.⁴¹

note 1, at 273 ("These data show that water savings from installation of higher efficiency devices tend to get obscured by increased water use elsewhere.").

34. Anderson, *supra* note 26, at 28 (showing fees have not affected new development).

35. See Bates, *supra* note 5, at 87 & n. 152 (asserting that urban water use efficiency could play a role in reducing surface water appropriations).

36. See LaPado-Breglia, *supra* note 24 ("We need to substitute this mindless open season with a 'demand-offset' system.") (quoting in part Arizona professor and author Robert Glennon).

37. See PETER GLEICK, PRESIDENT, PAC. INST., TESTIMONY TO CALIFORNIA STATE WATER RESOURCES CONTROL BOARD, ON THE CALIFORNIA DROUGHT 5 (Feb. 26, 2014), available at <http://pacinst.org/wp-content/uploads/sites/21/2014/02/urban-water-efficiency-testimony.pdf> (on file with the *McGeorge Law Review*) [hereinafter GLEICK TESTIMONY] (asserting that water supplier expenditures on efficiency "are inadequate compared to the potential for efficiency improvements . . ."); WATER FOR GROWTH, *supra* note 10, at 98–99 (describing existing customers' unwillingness to share water resources with new development, and the potential for new development to provide funding for existing customer conservation).

38. See SCWD Survey Memo, *supra* note 32, at 4 ("Two in three (66%) [of existing customers] say that new development is making the water shortage worse. But when told that all new development is required to offset its water use via retrofitting of existing buildings, and that in fact new developments are actually reducing net water use, we found that just 26% want to ban new development and now 66% support it.").

39. CAL. DEP'T OF WATER RES., URBAN DROUGHT GUIDEBOOK 2008 UPDATED EDITION 6 (2008) [hereinafter 2008 URBAN DROUGHT GUIDEBOOK].

40. Caitlin S. Dyckman, *The Covenant Conundrum in Urban Water Conservation*, 40 URB. LAW. 17, 49 (2008) ("government regulation manufactures developer incentive").

41. See AQUACRAFT, *supra* note 1, at 276; see also CAL. DEPT. OF WATER RES., A REPORT TO THE

Water neutral programs also have costs and risks. The supplier incurs the cost of developing and implementing the program, and new development incurs the cost of offsets and in-lieu fees.⁴² The cost to developers may translate to increased housing or homeowner costs, which may result in higher home prices and potentially less affordable housing.⁴³ If costs are too high, they may preclude new development, resulting in less housing stock (or less affordable housing stock).⁴⁴ Foregone development may result in fewer jobs, less economic growth, and lost amenities for the community.⁴⁵ Water neutral programs also have the potential to invite controversy, and even litigation, if the costs of compliance are high or the development community perceives a disconnect between project impacts and program fees.⁴⁶

Some water neutral programs may delay rather than avoid impacts of additional water demand.⁴⁷ However, even where savings are temporary, the delay may be valuable to water suppliers, as it provides time to investigate supplemental sources of supply while also reaping other benefits of water neutral.⁴⁸ The benefits can be increased if the offset standard is set at a greater than 1:1 ratio and if mandatory use restrictions are imposed.⁴⁹ A retrofit program that is combined with other measures, such as landscaping changes, greywater systems, recycled water infrastructure, or stormwater recharge, may contribute significantly to long-term sustainability by increasing the total supply, encouraging attention to efficiency in new development, and promoting innovation.⁵⁰

Water neutral programs are necessarily different within each jurisdiction, and the specific design of each program will determine the balance between potential

LEGISLATURE PURSUANT TO AB 1881 SECTION 65595(A)(2), 11 (2009).

42. See Lincoln L. Davies, *Just a Big, "Hot Fuss"?* *Assessing the Value of Connecting Suburban Sprawl, Land Use, and Water Rights through Assured Supply Laws*, 34 *ECOLOGY L.Q.* 1217, 1234 (2007).

43. *Id.*

44. *Id.*

45. *Id.*

46. See Kanouse & Wallace, *supra* note 14, at 157–58 (2010) (describing the controversy surrounding a proposal of a large development in the wake of hotly contested litigation regarding water savings measures).

47. See Memorandum for Soquel Creek Water District Board of Director on Agenda Item 5.2, at 7 (June 3, 2014), in SOQUEL CREEK WATER DISTRICT, BOARD AGENDA PACKET, at 243 (June 3, 2014), available at http://www.soquelcreekwater.org/sites/default/files/documents/board-meeting/packets/06-03-14_Board_Packet_pdf (on file with the *McGeorge Law Review*) [hereinafter SCWD Agenda Item 5.2 Memo] (“[T]he program speeds up conservation that would already happen. But every year that conservation doesn’t happen compounds the amount of required conservation as well”); *id.* (estimating that the district’s retrofit-focused water demand offset program delays the impact of new development by approximately twenty years).

48. See *id.*

49. *Id.* at 4 (“If the [offset] program continues, developers will likely help pay to offset some of this additional use . . . since the [offset] program has now been changed to require an offset of 200%, resulting in a net positive effect for 20 years. Assuming a continued average growth of 10 acre feet per year starting in 2014, by 2020 we will see not increased demand but will see reductions of about 240 acre-feet paid for by developers rather than rate payers.”).

50. See AQUACRAFT, *supra* note 1, at 256.

benefits and costs. Each water supplier must evaluate the potential benefits and costs to determine whether a water neutral program makes sense within its service area or within the broader region or watershed.⁵¹

III. A SAMPLING OF WATER NEUTRAL PROGRAMS

The following sample of California water neutral programs was developed by searching the Internet and legal research databases, and reviewing water supplier urban water management plans, water conservation plans, and related documents.⁵² As of March 2015, California does not collect information about regional and local water neutral programs in a standardized form.⁵³ For illustrative purposes, this Article surveys a non-comprehensive sample of select water neutral programs.⁵⁴ The sample provides an opportunity to introduce water

51. Cf. HILDA BLANCO, JOSH NEWELL, L. STOTT & M. ALBERTI, UNIV. OF S. CAL., WATER SUPPLY SCARCITY IN SOUTHERN CALIFORNIA: ASSESSING DISTRICT LEVEL STRATEGIES, at xix (2012) (“If water districts pursue both new water supply and conservation, then economic benefits of conservation . . . are not realized.”).

52. State-approved urban water management plans, and some water conservation plans, are available through the California Department of Water Resources at <http://www.water.ca.gov/urbanwatermanagement/2010uwmps/> (on file with the *McGeorge Law Review*). In preparing this Article, these documents were searched using the terms “offset,” “neutral,” “new development,” “retrofit” and “footprint.” Results are limited by the fact that not all documents are searchable, and because water neutral programs are not always identified in UWMPs or water conservation plans.

53. The lack of standardized electronic reporting has been identified as an improvement recommended for water conservation programs generally. See, e.g., CAL. DEP’T OF WATER RES., REPORT TO THE LEGISLATURE ON URBAN WATER MANAGEMENT PLAN DEMAND MANAGEMENT MEASURES REPORTING AND REQUIREMENTS 14 (Feb. 2014) (recommending that the Department of Water Resources be authorized to require electronic filing of UWMPs, including standardized forms, to facilitate better data about conservation programs). Some of the recommendations for improving reporting were enacted in September 2014 via SB 1420 (Wolk) and AB 2067 (Weber). In relevant part, SB 1420 provided that UWMPs or amendments thereto must be submitted electronically and must include “any standardized forms, tables, or displays specified by the department.” CAL. WATER CODE § 10644(a)(2) (enacted by 2014 Stat. Ch. 490) (SB 1420 (Wolk)). AB 2067 required narrative descriptions of certain demand management measures including “innovative measures, if implemented.” WATER § 10631(f)(B)(vii) (enacted by 2014 Stat. Ch. 463) (AB 2067 (Weber)).

54. Other studies have identified similar but not identical lists. See ALLIANCE FOR WATER EFFICIENCY, WATER OFFSET POLICIES FOR WATER-NEUTRAL COMMUNITY GROWTH: A LITERATURE REVIEW & CASE STUDY COMPILATION (Jan. 2015), available at <http://www.allianceforwaterefficiency.org/WorkArea/DownloadAsset.aspx?id=9167> (on file with the *McGeorge Law Review*) [hereinafter WATER OFFSET POLICIES] (describing examples of past and current water neutral policies in the United States); WESTERN RESOURCE ADVOCATES, WATER CONSERVATION OFFSET PROGRAMS, SUMMARY (June 2012); Anderson, *supra* note 26, at 27–28. Some of the programs identified but not explored here include: (1) closed programs in the California cities of Ojai, San Luis Obispo, and Santa Barbara, Abington-Rockland Joint Water Works, Massachusetts, and the Town of Sharon, Massachusetts; and (2) existing California programs in Borrego Water District, Monterey Peninsula Water Management District, San Diego County Water Authority, and the City of Santa Monica, and the Town of Danvers in Massachusetts. Other programs likely exist. See generally WATER OFFSET POLICIES, *supra*; see also *infra* notes 243–245 (describing programs identified but not described in the sample). Various California communities are pursuing new water neutral programs, or have identified demand offset as a policy objective or recommendation, and are not included in the sample: e.g., CITY OF VENTURA, *supra* note 25 (Water Dedication and In-Lieu Fee Ordinance and Resolution); CITY OF WATSONVILLE, WATSONVILLE VISTA 2030 GENERAL PLAN 17 (2013) (Policy 12.2.32, Water Demand Offset Ordinance) (“The City of Watsonville

neutral programs, review the nature and scope of a range of such programs, identify examples of different kinds of programs, and establish a basis for further investigation. As described in Part VI, the sample set could be used as a starting point for development of a model ordinance that would provide water suppliers with standard recitals and a suite of options to assist with developing a water neutral program.

A. California Water Neutral Programs

The sample highlights a couple of facts. First, California water neutral programs are primarily retrofit programs, with a focus on toilet retrofit programs.⁵⁵ A few of these programs allow retrofit of other fixtures or recognize

shall adopt a Water Demand Offset Ordinance. The ordinance shall require applicants for new water service to offset at least the amount of water the new development is projected to use so that there is “zero” impact on the City’s water supply. Applicants for new service could accomplish the offset requirements by paying for water conservation measures such as low-flow fixture retrofits or synthetic turf retrofits for existing customers within City limits.”); *see also* J. Ricker, Water Res. Div. Dir., Cnty. of Santa Cruz, Presentation: Water Neutral Development in Santa Cruz County (Dec. 5, 2011) (on file with the *McGeorge Law Review*); TOWN OF WINDSOR, 2010 URBAN WATER MANAGEMENT PLAN (June 2011) 3-6 to -7 tbl. 3-6, 4-7, tbl. 4-6 (demand table footnotes stating that “projected water use is based on the findings of the Maddaus Water Management Report, November 2010, assuming Plumbing Code, New Development Offsets, Tier 1 . . .”). In other cases, organizations and individuals involved with water policy have recommended adoption of water neutral programs. SPUR REPORT, FUTURE-PROOF WATER, 26 (Mar. 2013) (recommending water neutral as a tool for Bay Area water supply reliability); CITY OF TRACY, CITYWIDE WATER SYSTEM MASTER PLAN 22–23 (Nov. 2012) (recommending adoption of offset program for new development that exceeds Master Plan projections); RMC WATER & ENV’T MOKELUMNE/AMADOR/CALAVERAS INTEGRATED REGIONAL WATER MANAGEMENT PLAN UPDATE (2012) [hereinafter 2012 RMC WATER PLAN] (adopting demand offset programs as regional objective for participating suppliers); S.F. WATER POWER SEWER, CITIZEN ADVISORY COMM., WATER CONSERVATION AND NEW DEVELOPMENT RESOLUTION (2011) (committee “urges the Commission to adopt . . . a ‘water neutral’ development policy”); HODDE ET AL., *supra* note 12, at 13–14 (recommending water neutral development); SANTA ANA WATERSHED PROJECT AUTHORITY, 2010 INTEGRATED REGIONAL WATER MANAGEMENT PLAN Ch. 5.5 (2010) (suggesting demand offsets on a watershed basis); GREEN LA COALITION, NOT ENOUGH TO WASTE: SOLUTIONS TO SECURING LA’S WATER FUTURE, 4, 14 (July 2010) (recommending water neutral development); CITY OF PASADENA ENVTL. ADVISORY COMMITTEE, SPECIAL MEETING ENVIRONMENTAL ADVISORY COMMISSION OFFICIAL MINUTES FOR SEPTEMBER 22, 2009 (Sept. 22, 2009) (inquiring whether staff had considered a development offset program); *cf.* *Best Water Practices: Water Demand Offsets*, GREEN CITIES CAL., http://greencitiescalifornia.org/best-practices/water/soquel_water-demand-offsets.html (last visited July 29, 2014) (on file with the *McGeorge Law Review*) (identifying water demand offsets as a “best practice” for green cities); YUCAIPA VALLEY WATER DISTRICT, A STRATEGIC PLAN FOR A SUSTAINABLE FUTURE 20–24 (2008) (requiring new development in designated groundwater basin to purchase water supplies). Related programs include a program in Phoenix, Arizona that charges a “water resources acquisition fee” that can be reduced via credits for conservation measures. *See, e.g.*, Alex Wilson, *Water Policies: Encouraging Conservation*, BUILDING GREEN (Aug. 28, 2008), at www2.buildinggreen.com/article/water-policies-encouraging-conservation (on file with the *McGeorge Law Review*). Tucson, Arizona has issued a drought plan that lists demand offsets as a potential option during the later stages of a drought emergency. *See* CITY OF TUCSON WATER DEPARTMENT DROUGHT PREPAREDNESS AND RESPONSE PLAN (Feb. 2012) (stating that in a Stage 4 emergency “‘demand offset programs’ may be developed and implemented—meaning that new commercial and residential development may not be permitted unless the projected water demand of that development is ‘offset’ through water demand reductions elsewhere, such as through retrofitting older facilities to reduce water consumption”).

55. *See* Part III.A (describing retrofit programs in Cambria, East Municipal Utility District, Lompoc,

additional methods for increasing supply, such as participation in recycling projects or even bringing in new supplies.⁵⁶ In some jurisdictions, developers must find and carry out the retrofits themselves, i.e., “go knocking on doors” to identify retrofit opportunities.⁵⁷ Other jurisdictions maintain lists of eligible retrofits.⁵⁸ Most programs also provide for an in-lieu fee, which is used by the supplier to carry out water conservation programs, expand rebate programs, or even acquire new supplies.⁵⁹

The sample also suggests that in California, water neutral programs are most likely to exist where two factors are present.⁶⁰ The first factor is the presence of a community that is largely dependent on a slow-replenishing source of supply, such as groundwater, or that because of location depends on annual rainfall or imported water for supplemental supplies.⁶¹ Geography also precludes some of the communities from importing water, which itself is also a vulnerable source of supply due to droughts and environmental constraints. The second factor is the occurrence of a multi-year drought that highlights the vulnerability of that community’s supply.⁶² Most of the programs in the sample were adopted in either in the drought of 1988–1991, 2007–2009, or 2012–2014.⁶³ With rare exception,

Morro Bay, Napa, St. Helena, and Soquel Creek Water District); *see supra* notes 22 & 23 and accompanying text (describing reasons for primacy of toilet retrofit programs).

56. *See, e.g.*, CITY OF VENTURA, *supra* note 25, at 8 (Water Dedication and In-Lieu Fee Ordinance and Resolution) (requiring new water supplies or in lieu fee); Memorandum from Mark S. Norris, Assistant Public Works Director, to City Council on Water Supply Outlook and Confirmation of Policies Regarding Projects Creating New Water Demands 188–89 (Oct. 19, 2009) (on file with the *McGeorge Law Review*) [hereinafter Norris Memo].

57. ST. HELENA, CAL. MUNICIPAL CODE § 13.12.050(F); Telephone Interview with D. Hight, City of St. Helena, Assistant Dir. Public Works (Feb. 24, 2014) (notes on file with the *McGeorge Law Review*) [hereinafter Hight Interview].

58. *See, e.g.*, CNTY. OF SAN LUIS OBISPO, WATER CONSERVATION IMPLEMENTATION PLAN FOR THE LOS OSOS WASTEWATER PROJECT (Oct. 2012), *available at* <http://www.slocounty.ca.gov/Assets/PW/LOWWP/document+library/Revised+Final+Draft+WVIP.pdf> (on file with the *McGeorge Law Review*) (detailing eligible retrofit fixtures).

59. BLANCO ET AL., *supra* note 51, at xix (“If water districts pursue both new water supply and conservation, then economic benefits of conservation . . . are not realized.”); Ron Duncan, Soquel Creek Water District, Presentation Slides of Soquel Creek Water District’s Water Demand Offset Program at Planning & Conservation League Symposium (2009) (on file with the *McGeorge Law Review*) [hereinafter Duncan SCWD Presentation] (water neutral program intended to bridge the gap between shortage and new supplies rather than defer capital facilities).

60. *See, e.g.*, CCSD 2010 PLAN, *supra* note 16, at 2-2 to -3 (discussing water and its difficulties in Cambria).

61. *Id.*

62. SAN DIEGO CNTY. WATER AUTH., URBAN WATER MANAGEMENT PLAN 11-5 (2010) (describing the impact a multi-year drought has on the areas water supply).

63. *See, e.g.*, CCSD 2010 PLAN, *supra* note 16, at 2-1 to -2 (discussing the initiation of the program in 1988); CITY OF LOMPOC URBAN WATER MANAGEMENT PLAN 27 (2010), *available at* http://www1.cityoflomdoc.com/utilities/water/2010_LompocUWMP.pdf (on file with the *McGeorge Law Review*) [hereinafter LOMPOC 2010 PLAN] (noting the beginning of the program in 1990 during a statewide drought); *Trading New Development for Water Savings in Napa*, CURRENTS: AN ENERGY NEWSLETTER FOR LOCAL GOVERNMENTS (Summer 2013), <http://www.lgc.org/currents2013-summer-5> (on file with the *McGeorge Law Review*) [hereinafter *Trading New Development in Napa*] (mentioning the start of the program in 1991 during

water neutral programs were not adopted outside of the drought or shortage context as a proactive tool to improve drought resilience or sustainability.

Cambria Community Services District. Cambria Community Services District is a special district that provides water service to the unincorporated community of Cambria, in San Luis Obispo County, on the central California coast.⁶⁴ The district serves about 6,000 year-round customers plus a significant tourist demand.⁶⁵ Cambria's water supply is a key limiting factor for local growth, with projects sitting on long-term wait-lists for approval due to development limits.⁶⁶ Cambria's supply is derived from two groundwater aquifers with limited storage so that the aquifers are drawn down each summer before recharging in the winter and spring.⁶⁷ Droughts, or even late-arriving rainfall, can cause the supply to become very low by late summer or early fall.⁶⁸ These low groundwater levels exacerbate the intrusion of seawater into the aquifers, which makes the water unusable without high treatment costs.⁶⁹ Moreover, Cambria has limited opportunities for supplemental water; the area cannot receive water from the state project due to its isolated geographic location.⁷⁰ As a result of these supply constraints, Cambria has existed in a perpetual "water emergency" per the California Water Code, with an accompanying building moratorium, since 2001.⁷¹

Cambria's building moratorium contains a water neutral exception, under which new construction or improvements that increase water use are allowed only where the development undertakes water-saving retrofits that meet the district's 2:1 offset standard, or pays an in-lieu fee.⁷² The district developed its

the statewide drought); *Paso Robles Groundwater Basin*, COUNTY OF SAN LUIS OBISPO (Feb. 2014), <http://www.slocounty.ca.gov/planning/commguidelines/PRgroundwater.htm> (on file with the *McGeorge Law Review*) [hereinafter *Paso Robles Groundwater Basin*] (discussing the implementation of an ordinance in 2012 as a result of low supplies and new developments).

64. See CCSD 2010 PLAN, *supra* note 16, at 2-2.

65. *Id.*

66. *Water Wait List*, CAMBRIA COMMUNITY SERVICES DISTRICT, http://www.cambriacsd.org/cm/water_wastewater/water_permits/wait_list.html (last visited July 29, 2014) (on file with the *McGeorge Law Review*).

67. CCSD 2010 PLAN, *supra* note 16, at 2-2, 2-4.

68. *Id.*

69. *Id.*

70. *Id.*

71. See Wilson, *supra* note 54 (describing Cambria's moratorium and offset program); see also *Long Term Water Supply*, CAMBRIA COMMUNITY SERVICES DISTRICT, www.cambriacsd.org/cm/projects/Long%20Term%20Water%20Supply/Home.html (last visited July 29, 2014) (on file with the *McGeorge Law Review*); WATER OFFSET POLICIES, *supra* note 54, at 15-18 (describing Cambria's water neutral policy and growth management limits imposed by San Luis Obispo County).

72. CAMBRIA, CAL. MUNICIPAL CODE, tit. 4, ch. 4.20.080 (describing transferability of retrofit credits and value of retrofit points); see CAMBRIA CMTY. SERV. DIST., WATER USE EFFICIENCY PLAN 26 (2013) (demand management measure requires retrofit of existing home upon resale or remodel, or payment of in-lieu fee to support water conservation programs); *Retrofit-to-Build*, CAMBRIA COMMUNITY SERVICES DISTRICT, http://www.cambriacsd.org/cm/water_wastewater/water_permits/retrofits_remodels.html (last visited July 29, 2014) (on file with the *McGeorge Law Review*); CCSD 2010 PLAN, *supra* note 16, at 6-2 (explaining the

water neutral retrofit program in the late 1980s, and has implemented the program for about two decades.⁷³ As of 2010, 88% of homes in Cambria had been retrofitted under the program with only an estimated 430 homes remaining, limiting the potential for new development under the program absent new offset options.⁷⁴ The district has suggested that more water savings can be realized if previous retrofits are upgraded to newer, higher-efficiency fixtures.⁷⁵

City of Big Bear Lake. The service area for the City of Big Bear is located in Bear Valley, near Lake Arrowhead in the San Bernardino Mountains in San Bernardino County.⁷⁶ Big Bear has a significant second-home and vacation population, with a full time service area of approximately 11,320, and an average weekend and holiday population of approximately 55,000.⁷⁷ Big Bear's water supply is derived primarily from groundwater wells in an adjudicated basin, with a small imported supply from Crestline Lake Arrowhead Water Agency for one portion of the service area.⁷⁸

In August 2005, Big Bear implemented a water demand offset program that required new development to pay an offset fee for new demand.⁷⁹ The fees were used to fund rebates for toilet retrofits for a short-term program, with the city processing 628 retrofits between 2005 and 2010.⁸⁰ The water demand offset fee ended in 2009, with the city's operations and maintenance budget covering subsequent toilet rebate funding.⁸¹

City of Lompoc. The City of Lompoc is in Santa Barbara County, on the Central Coast, with a population of approximately 43,300.⁸² The city's primary source of drinking water is groundwater,⁸³ supplemented by recycled water and a small amount of surface water from a local spring.⁸⁴ The groundwater basin is recharged by precipitation and Santa Ynez River flow, and occasionally through release of stored water from the U.S. Bureau of Reclamation's Cachuma Project.⁸⁵

district's point system for retrofitting).

73. See CCSD 2010 PLAN, *supra* note 16, at 6-2.

74. See *id.* (discussing retrofit program).

75. *Id.*

76. CITY OF BIG BEAR LAKE, DEPARTMENT OF WATER AND POWER, 2010 URBAN WATER MANAGEMENT PLAN 2-1 (2012) [hereinafter BIG BEAR LAKE 2010 PLAN].

77. *Id.* at 2-2.

78. *Id.*, at 3-1.

79. *Id.* 6-16; see Judi Bowers, *DWP Program Helps Save Natural Resource*, BIG BEAR GRIZZLY (Apr. 16, 2008, 12:00 AM), http://www.bigbeargrizzly.net/news/article_7bbe359b-582d-5379-acee-2a000d5ac823.html (on file with the *McGeorge Law Review*).

80. BIG BEAR LAKE 2010 PLAN, *supra* note 76, at 6-16 to -17.

81. *Id.*

82. LOMPOC 2010 PLAN, *supra* note 63, at 12.

83. *Id.* at 14.

84. *Id.*

85. *Id.* at 15.

The city first adopted a water neutral retrofit program in 1990, during a period of statewide drought, and re-authorized the program in 2010.⁸⁶ Under the program, the Lompoc Municipal Code prohibits the city from issuing building permits for new construction unless the applicant implements a 1:1 offset for the project's water use.⁸⁷ The offsets can be accomplished directly through retrofits or, in the past, indirectly by paying an in-lieu fee to the city, which funds a general city retrofit program.⁸⁸ The in-lieu fee program was suspended in 2010.⁸⁹

City of Morro Bay. The coastal City of Morro Bay is located in San Luis Obispo County and has a population of approximately 10,461 persons, divided between seasonal and permanent residents.⁹⁰ The city obtains its water via a contract with the County of San Luis Obispo for supplies from the State Water Project; the city also has access to groundwater and sometimes desalinated water.⁹¹ The city's water supply has been so limited that the city and the California Coastal Commission have required the city to limit the number of new residential uses that may be approved each year.⁹²

Since at least the late 1970s, the city's code has contained an "equivalency" requirement under which water use by new development or other water intensifying projects must be offset through retrofits or other water conservation measures.⁹³ An equivalency is defined as "average amount of water used by a single-family residence over the period of one year," established by code at 10,780 cubic feet per year.⁹⁴ Different land uses are assigned equivalency factors as percentages of this baseline.⁹⁵ The code limits retrofit credits to half of the retrofit savings to create a margin for error in estimating savings and to reduce demand on already-limited water resources; the code does not allow retrofits of prior retrofits for new uses, and appears to limit the availability of credits to "infill" development.⁹⁶ Low-income areas have priority for retrofit projects.⁹⁷

86. *Id.* at 27.

87. LOMPOC, CAL. MUNICIPAL CODE tit. 13, ch. 13.04.070; see LOMPOC 2010 PLAN, *supra* note 63, at 47-48.

88. LOMPOC 2010 PLAN, *supra* note 63, at 47-48.

89. CITY OF LOMPOC, RESOLUTION NO. 5629, A Resolution of the Council of the City of Lompoc, County of Santa Barbara, State of California, Amending the Standards and Guidelines Relating to Development Project Impact on Water Supply (2010) (Retrofit/Rebate Program); see also WATER OFFSET POLICIES, *supra* note 54, at 23 (describing status of Lompoc's in-lieu fee program as of January 2015).

90. *Morro Bay (city)*, California, U.S. CENSUS BUREAU, <http://quickfacts.census.gov/qfd/states/06/0649362.html> (last updated Mar. 24, 2015) (2013 estimate).

91. CITY OF MORRO BAY URBAN WATER MANAGEMENT PLAN, 1-2 (2010).

92. CITY OF MORRO BAY, RESOLUTION NO. 32-14, A Resolution of the Council of the City of Morro Bay, California, Modifying the Water Allocation Program for 2014 (May 13, 2014) (describing Coastal Commission requirements); CITY OF MORRO BAY MUNICIPAL CODE, tit. 13, ch. 13.20.020 (water equivalency definition established in 1977).

93. CITY OF MORRO BAY MUNICIPAL CODE, tit. 13, ch. 13.20.080; see also *id.* 13.20.070 (equivalency table).

94. *Id.* ch. 13.20.020.

95. *Id.* ch. 13.20.070.

96. *Id.* 13.20.080(C)(3), (C)(5); *id.* 13.20.120(A)(3).

In May 2014, declaring that its water supply was severely restricted, the city adopted a more detailed retrofit requirement for new water allocations requested for 2014.⁹⁸ The city's resolution specifies that retrofits must offset increased use at a 2:1 or 440 gallons per day, or else the project proponent may provide "non-required water savings features for new development."⁹⁹ These features may include, among others, lawn replacement, gray water installation, rainwater harvesting, or payment of an in-lieu fee of \$2,900 per equivalency unit.¹⁰⁰

City of Napa. The City of Napa is located in the County of Napa, north of the San Francisco Bay Area, in one of the state's best-known wine regions.¹⁰¹ The city's municipal water system serves over 85,000 people in the city and adjacent areas; in addition to providing water in its own service area, the city sells retail water to local communities including the Town of Yountville and the City of St. Helena.¹⁰² The city's water supply comes from two local reservoirs and a State Water Project (SWP) contract.¹⁰³ The SWP contract is managed through a special district, the Napa Flood Control & Water Conservation District, which provides water supply, flood control, and stormwater management services on a countywide basis.¹⁰⁴ The city's SWP contract is vulnerable to significant cuts during dry years, as are all SWP municipal contracts.¹⁰⁵ To supplement its supply, Napa participates in water transfers and exchanges with other SWP contractors and local agencies.¹⁰⁶

Napa adopted a water neutral program in 1991, during the statewide drought, when the city amended its municipal code to incorporate a toilet retrofit program for new development.¹⁰⁷ The Napa Municipal Code requires that any new project "completely offset its water requirements" through retrofits or in-lieu fees.¹⁰⁸ The Code specifies that residential remodels must comply if the change would result

97. *Id.* 13.20.080(C)(8).

98. CITY OF MORRO BAY, RESOLUTION NO. 32-14, A Resolution of the Council of the City of Morro Bay, California, Modifying the Water Allocation Program for 2014 (May 13, 2014); *see also* *Water Conservation*, CITY OF MORRO BAY, <http://www.morro-bay.ca.us/index.aspx?nid=320> (last visited Mar. 31, 2015) (on file with the *McGeorge Law Review*) (declaring supply severely restricted) (last visited Mar. 28, 2015).

99. CITY OF MORRO BAY, RESOLUTION NO. 32-14, A Resolution of the Council of the City of Morro Bay, California, Modifying the Water Allocation Program for 2014 (May 13, 2014).

100. *Id.*

101. *About Napa*, CITY OF NAPA (Aug. 28, 2013), http://www.cityofnapa.org/index.php?option=com_content&task=view&id=92&Itemid=148 (on file with the *McGeorge Law Review*).

102. PATRICK COSTELLO, CITY OF NAPA, URBAN WATER MANAGEMENT PLAN 2010 UPDATE 1-3, 5-10, 5-17 (June 21, 2011).

103. *Id.*, at 3-1.

104. *Id.*

105. *Id.* at 4-5.

106. *Id.*

107. NAPA, CAL. MUNICIPAL CODE tit. 13, ch. 13.09.010(A), (G) (mandating that new development "completely offset its water requirements" through retrofits or in-lieu fees and noting that residential remodels "trigger a retrofit if the remodeling work would increase water use False"); *see Trading New Development in Napa*, *supra* note 63.

108. NAPA, CAL. MUNICIPAL CODE tit. 13, ch. 13.09.010(A)-(B).

in an increase in water use.¹⁰⁹ If hardship is demonstrated, projects may qualify to pay an in-lieu fee, which the city uses to fund retrofit of toilets or other water-saving devices.¹¹⁰ An exemption is provided for low-income households.¹¹¹ For many years the city's program was primarily focused on toilet replacement, but due to fewer fixtures available for replacement, the city may be considering a broader conversion to an offset fee that can be used for a wider variety of conservation measures, such as use of recycled water.¹¹²

City of Oxnard. Located on the Southern California coast in Ventura County, approximately thirty-five miles outside of Los Angeles city limits, the City of Oxnard has a population of over 200,000 residents. Oxnard's local supply is entirely groundwater from city wells, with the remainder of demand being met from imported surface water¹¹³ and groundwater.¹¹⁴

In 2008, the Oxnard City Council gave its staff direction to require that "all projects of significant size" be neutral to the city's water system.¹¹⁵ Oxnard's policy is broad; it provides that developments can contribute not only physical or financial offsets, but also water rights or supplies.¹¹⁶ Developers can dedicate groundwater allocations to the city, participate in expansion of the city's recycled water system, or participate in water conservation projects that result in

109. *Id.* at (G).

110. *Id.* at (B).

111. *Id.* at (A)(1)-(4).

112. *Trading New Development in Napa*, *supra* note 63.

113. Oxnard purchases imported surface water from Calleguas Municipal Water District, a wholesale agency which in turn purchases most of its water from the Metropolitan Water District. Metropolitan has multiple sources of supply including the California State Water Project, the Colorado River, and local storage and pumping. *Water Resources Overview-Water Quality is Our Priority-Ventura County*, CALLEGUAS MUNICIPAL WATER DISTRICT, www.calleguas.com/water_resources_overview.htm (last visited July 29, 2014) (on file with the *McGeorge Law Review*).

114. Oxnard purchases groundwater from the United Water Conservation District, which manages the Santa Clara River and tributaries conjunctively with groundwater pumping to provide water to Oxnard and other cities, districts and individual water users. *Facilities and Strategies*, UNITED WATER CONSERVATION DISTRICT, www.unitedwater.org/about-us-6/facilities-a-strategies (last visited July 29, 2014) (on file with the *McGeorge Law Review*).

115. CITY OF OXNARD WATER CONSERVATION MASTER PLAN 29 (2010) [hereinafter 2010 OXNARD PLAN] ("New Construction—The City Council affirmed a policy to require any new development coming into the City to be conditioned to ensure that it is water neutral. In other words, it should not put an extra burden on our water supply. Projects can become water neutral by a number of means, including contribution to water conservation programs with quantifiable, long-term results."); see Norris Memo, *supra* note 56, at 188-89; see also Jack Searles, *Oxnard: Council To Study Water Saving Steps*, L.A. TIMES, Aug. 17, 1991, http://articles.latimes.com/1991-08-17/local/me-403_1_water-usage (proposing to investigate a water neutral policy in 1991, near the end of several years of drought); WATER OFFSET POLICIES, *supra* note 54, at 49-51 (describing city's 2008 actions).

116. OXNARD, CAL. CODE OF ORDINANCES § 22-154(C)(19) (June 23, 2009) (Limits on New Water Service) ("Depending on the severity of the drought, issuance of building permits which require new or expanded water service may be limited or withheld, except to protect the public's health, safety and welfare, or in cases which meet City Council adopted conservation offset requirements."); see 2010 OXNARD PLAN, *supra* note 115 and accompanying parenthetical; see Norris Memo, *supra* note 56, at 188-89.

“measurable sustainable water savings.”¹¹⁷ In 2009, staff reported that the program was proceeding successfully—several larger projects had complied and others were discussing offsets with the city.¹¹⁸

In 2011, Oxnard’s water neutral policy was an issue in a legal challenge related to a battle between the city and Southern California Edison over a new electrical generating facility.¹¹⁹ The California Coastal Commission approved the facility, but Oxnard challenged the approval on several grounds, and asserted that Edison had to comply with the water neutral policy.¹²⁰ The trial court stated, without detailed discussion, that any disagreement between the city and Edison over the water neutral policy was not relevant to the commission’s decision.¹²¹ In an unpublished opinion, the Second District Court of Appeal upheld the approval of the facility.¹²² With respect to the water neutral policy, the court found that the policy had not been incorporated into relevant local coastal plan policies or otherwise made sufficiently formal so as to mandate application to Edison, at least not at the local coastal plan stage.¹²³ The court noted that the city could apply the policy to Edison at a later stage in the approval process “if the program has been adopted and implemented.”¹²⁴

City of St. Helena. The City of St. Helena, located in Napa County to the north of the San Francisco Bay Area, is a small community with a population of approximately 6,000.¹²⁵ St. Helena’s water supply depends on local reservoir storage, city wells, and a water contract with the City of Napa that yields between 400 and 800 acre-feet per year.¹²⁶

St. Helena’s water neutral policy was adopted in 2011, after the city concluded that its supply was insufficient to allow the city to serve its customers without undue hardship.¹²⁷ The city’s water neutral policy requires new

117. Norris Memo, *supra* note 56, at 188–89.

118. *Id.*

119. *City of Oxnard v. Cal. Coastal Comm.*, No. B227835, 2011 WL 3612215, at *3 (Cal. Ct. App. Aug. 17, 2011).

120. *Id.*

121. *Id.*

122. 2010 OXNARD PLAN, *supra* note 115, at 29 (“While this City policy has not been codified, it has been applied to every development project approved since 2008.”); *City of Oxnard*, 2011 WL 3612215, at *11.

123. *City of Oxnard*, 2011 WL 3612215, at *4.

124. *Id.*

125. *About St. Helena*, ST. HELENA, CALIFORNIA, <http://www.ci.st-helena.ca.us/content/about-st-helena> (last visited Aug. 28, 2014) (on file with the *McGeorge Law Review*).

126. ST. HELENA MUNICIPAL CODE 13.12.050 (requiring zero water use increase through any combination of on-site conservation, off-site retrofitting/in-lieu fee, or use of well water); *see also* CITY OF ST. HELENA, 1993 ST. HELENA GENERAL PLAN [hereinafter 1993 ST. HELENA GENERAL PLAN] (“new development” contingent on ability of City to provide water without exceeding safe yield); Hight Interview, *supra* note 57.

127. St. Helena’s policy was contemplated as early as 1993. *See* 1993 ST. HELENA GENERAL PLAN *supra* note 126 (defining St. Helena’s water neutral policy); ST. HELENA, CAL., MUNICIPAL CODE § 13.12.050(A) (“new development shall completely offset its water requirement”). Gary Broad, *City Declares Phase I and II Water Shortage Emergencies—Conservation Critical!*, CITY OF ST. HELENA, <http://cityofsthelema.org/>

development to offset demand at a 1:1 ratio to ensure neutrality to the city's water system.¹²⁸ Because the purpose of the policy is to protect city suppliers, the city has indicated that uses that rely on individual groundwater wells are exempt.¹²⁹ If the proposed development is an expansion or remodel, the retrofits can be within the same building; otherwise, the retrofits take place offsite.¹³⁰ Developers are responsible for identifying retrofit opportunities and for submitting reports that quantitatively demonstrate a zero increase in water use.¹³¹ The rule previously allowed for acceptance of fees in-lieu of retrofits;¹³² however, the city subsequently suspended this option for an indeterminate period, which was still in effect as of August 2014.¹³³ The city's policy provides that an applicant can petition to use an "alternative innovative method," instead of fixture retrofits, to achieve water neutrality.¹³⁴

County of San Luis Obispo. The County of San Luis Obispo, located along the central California coast, is a focal point for water supply shortages due to its location and consequent dependence on rainfall and groundwater, juxtaposed with increasing agricultural, vineyard, and residential development.¹³⁵ The county's water neutral initiatives have focused on protecting groundwater supplies in the face of severe shortages, including claims of dry wells, and the potential for groundwater adjudication.¹³⁶

Water neutral standards currently apply to the Paso Robles groundwater basin, which encompasses over 500,000 acres in the county.¹³⁷ The basin is the

content/city-declares-phase-ii-water-emergency (last visited Mar. 30, 2015) (on file with *McGeorge Law Review*) (stating that in February 2014, "Bell Canyon was at 38.6% of capacity (295 acre feet versus 730 acre feet in 2013)", with the city's monthly demand increasing from prior years. City consumption was "almost 30% higher" in February 2014 than the prior year; that same month, the city instituted phase two of a formal water emergency).

128. See ST. HELENA WATER NEUTRAL POLICY FOR DEVELOPMENT (2011); 1993 ST. HELENA GENERAL PLAN, *supra* note 16, at Policy 9.2.1 (requiring water neutrality with "no net increase in demand").

129. See ST. HELENA, CAL., MUNICIPAL CODE § 13.12.020 (defining "water" as "treated water that is supplied by the city's water enterprise water distribution system unless otherwise indicated."); Hight Interview, *supra* note 57.

130. ST. HELENA WATER NEUTRAL POLICY FOR DEVELOPMENT (2011).

131. ST. HELENA, CAL., MUNICIPAL CODE § 13.12.050(F) ("The developer shall be responsible for identifying residential or nonresidential properties eligible for retrofitting").

132. *Id.* § 13.12.050(B) (describing the circumstances under which in-lieu fees will substitute for retrofits).

133. WATER OFFSET POLICIES, *supra* note 54, at 32 n. 57.

134. *Id.* § 13.12.050(C) (indicating that "alternative innovative method" is available upon petition and acceptance by the city council).

135. *E.g.*, CNTY. OF SAN LUIS OBISPO, CAL., ORDINANCE 3246 (Aug. 27, 2013) [hereinafter SLO ORDINANCE 3246].

136. *Id.*

137. *Id.*; see also CNTY. OF SAN LUIS OBISPO, RESOLUTION NO. 2014-56 (2014) [hereinafter RESOLUTION NO. 2014-56]; CNTY. OF SAN LUIS OBISPO, CAL., COUNTY CODE § 22.92.020(D)(5), (5)(b) [hereinafter SAN LUIS OBISPO COUNTY CODE § 22.92.020] ("New development [in the Paso Robles Groundwater Basin area] requiring discretionary land use permits shall offset the resulting net new water demand as follows . . . [t]he net new water demand shall be offset at a ratio of 2:1 through participation in [listed] water conservation

primary water source for the northern part of the county, including residential, vineyard, and irrigated agriculture users.¹³⁸ In September 2012, the county adopted a water conservation ordinance that required new development within the Paso Robles Groundwater Basin to meet a 2:1 offset requirement.¹³⁹ The ordinance applied primarily to new large land uses, prohibiting the creation of new parcels in the basin and directing integration of water neutral standards into the County General Plan.¹⁴⁰ The ordinance had limited applicability by its terms and contained exemptions for certain communities and for construction of single-family homes.¹⁴¹

In August 2013, faced with continuing water shortages including claims of wells going dry, the county adopted a forty-five day temporary urgency ordinance that banned additional pumping unless new development, including new irrigation, offsets water use from the groundwater basin at a 1:1 ratio.¹⁴² In October 2013, the county extended the ordinance for approximately two years, and in February 2014, the county adopted a resolution containing a “vested rights exemption” policy under which applicants that had taken specified well drilling, crop production, and other commitments prior to the August 2013 ordinance approval were exempt from the offset requirements.¹⁴³

For residential and commercial development, the ordinance is implemented through a water conservation program adopted by resolution in February 2014.¹⁴⁴ The program offers applicants the opportunity to purchase offset credits.¹⁴⁵ The county reports that it is in the process of developing a similar program for

programs”); *Paso Robles Groundwater Basin*, *supra* note 64 (identifying demand offsets as a land use measure for managing development in the basin).

138. *Paso Robles Groundwater Basin*, *supra* note 64 (noting the capacity and use of the Paso Robles Groundwater Basin).

139. CNTY. OF SAN LUIS OBISPO, ORDINANCE 3231 (Sept. 25, 2012) (section 1.D(5)(b)) (adopted but not yet codified at http://www.slocounty.ca.gov/clerk/County_Codes__Traffic_Codes/codesadopted.htm); *see also Paso Robles Groundwater Basin*, *supra* note 64 (identifying demand offsets as a land use measure for managing development in the basin).

140. SAN LUIS COUNTY CODE § 22.92.020, *supra* note 137.

141. *Id.* at figure 92-4 (exempting cities of Paso Robles, Atascadero, the towns of Templeton, San Miguel and Shandon, drilling of wells, and building of single family homes).

142. SLO ORDINANCE 3246, *supra* note 135; *see also* Resolution no. 2014-56, *supra* note 137.

143. *See* CNTY. OF SAN LUIS OBISPO BD. OF SUPERVISORS LANGUAGE APPROVED BY THE BOARD OF SUPERVISORS-11/26/13 DETERMINATION OF AN EXEMPTION FROM ORDINANCE 3246 (2013) (vested rights exemption); CNTY. OF SAN LUIS OBISPO, ORDINANCE 3247 (Oct. 8, 2013) (extension of temporary urgency ordinance).

144. Resolution no. 2014-56, *supra* note 137; *see also* *You May Qualify for Free Water-Efficient Plumbing Fixtures*, PASO BASIN, <http://www.pasobasin.org/urgency-ordinance/plumbing-retrofit-program/> (last visited Mar. 30, 2015) (on file with the *McGeorge Law Review*).

145. *Id.*

agriculture.¹⁴⁶ The program will investigate the potential for irrigation efficiency and removal of land from production to achieve offsets.¹⁴⁷

The Paso Robles water neutral initiatives are not the county's first foray into offsets, and may not be the last. The county has required retrofits in the Los Osos groundwater basin for new construction and on resale as part of the land use and construction permit processes since 2008.¹⁴⁸ That program subsequently overlapped with county-imposed retrofit requirements for properties seeking new connections to the wastewater system, adopted in response to a California Coastal Commission requirement for water conservation as part of the Los Osos wastewater project.¹⁴⁹ The county has also required retrofits in the Nipomo Mesa Conservation Area.¹⁵⁰ In March 2014, the county directed staff to develop a proposal to extend water neutral development requirements to the entire unincorporated county.¹⁵¹

The County's offset policies apply to individual groundwater pumping and agricultural activities in addition to water delivered by a supplier for urban use,¹⁵² and this pumping element creates distinct challenges such as allegations of interference with property rights and the overlay of complex (and evolving) groundwater regulation in California. The county's emergency ordinance establishing the offset requirement for the Paso Robles basin was challenged by local pumpers in superior court in November 2013.¹⁵³ The lawsuit challenged the

146. *Paso Robles Groundwater Basin*, *supra* note 64; *How Can I Offset Water Use for New or Expanded Irrigated Crop Production?*, PASO BASIN, <http://pasobasin.org/urgency-ordinance/water-usage-offset-new-or-expanded-irrigated-crop/> (last visited Mar. 30, 2015) (on file with the *McGeorge Law Review*).

147. *Paso Robles Groundwater Basin*, *supra* note 64.

148. SAN LUIS OBISPO CNTY., CAL., COUNTY CODE, tit. 19, § 19.07.042(e); SAN LUIS OBISPO CNTY., LOS OSOS GROUNDWATER BASIN RETROFIT, Title 8 Ordinance (Apr. 22, 2008); *see* SAN LUIS OBISPO CNTY., LOS OSOS GROUNDWATER BASIN RETROFIT, Title 19 Ordinance (Apr. 22, 2008); *see also* Memorandum from James Caruso, Senior Planner and Builder, to San Luis Obispo Cnty. Bd. of Supervisors, Re: Amendments to Retrofit Ordinances (Jan. 14, 2014) (on file with the *McGeorge Law Review*); Rhys Heyden, *Supes OK Drive-Thru McDonald's in Los Osos*, NEW TIMES (Apr. 9, 2014), <http://www.newtimeslo.com/news/10807/supes-ok-drivethru-mcdonalds-in-los-osos/> (on file with the *McGeorge Law Review*) (describing application of retrofit ordinances).

149. SLO COUNTY PLAN FOR LOS OSOS, *supra* note 8, at 1-2, 7.

150. SAN LUIS OBISPO CNTY., CAL., COUNTY CODE, tit. 19, § 19.07.042(d) (Nipomo Mesa Conservation Area).

151. Cnty. of San Luis Obispo Bd. Of Supervisors, 3/4/2014 Agenda Item Transmittal, Ex. A (predicting 6-12 month timeline for development); *see also* Michael F. Brown, *State Water Board Threat Raises Serious Questions*, 4 COAL. OF LABOR AGRIC. & BUS. 2-3 (May 2014) (reporting on County of San Luis Obispo Board of Supervisors meeting of Tuesday March 4, 2014) (countywide water conservation ordinance).

152. *Cf.* BORREGO DEMAND OFFSET POLICY, *supra* note 24; UTTON TRANSBOUNDARY RESOURCES CENTER, UNIV. OF NEW MEXICO SCH. OF LAW, WATER MATTERS!, at 6-6 "Groundwater" (2014) (Darcy S. Bushnell ed.), available at <http://uttoncenter.unm.edu/pdfs/water-matters-2014/2014-water-matters-lr.pdf> (on file with the *McGeorge Law Review*) (describing Utah requirements for groundwater offsets).

153. *E.g.*, Janet Lavelle & David Sneed, *Several Landowners Suing County Over Water Law Have Deep Roots in the Area*, SAN LUIS OBISPO TRIB. (Dec. 14, 2013), <http://www.sanluisobispo.com/2013/12/14/2835992/several-landowners-suing-county.html> (on file with the *McGeorge Law Review*); Julie Lynem & David Sneed, *Lawsuits Filed Against Emergency Ordinance on Paso Robles Basin*, SAN LUIS OBISPO TRIB. (Nov. 26, 2013), http://www.sanluisobispo.com/2013/11/26/2805_000/paso-robles-groundwater-basin.html (on

county's authority to adopt offsets for groundwater pumping, and alleged unlawful interference with water rights.¹⁵⁴ The county superior court rejected these claims, holding that Article X section 2 of the California Constitution supports the offset policy.¹⁵⁵ A second lawsuit filed in November 2013 sought judicial action to address various groundwater rights in the Paso Robles Basin; that case was transferred to another county and, as of March 2015, the court had scheduled trial on preliminary issues for December 2015.¹⁵⁶ Simultaneously, various local groups are pursuing the idea of allocating basin management responsibility to a new special district dedicated to that purpose.¹⁵⁷

East Bay Municipal Utility District (EBMUD). Located in the eastern San Francisco Bay Area, EBMUD's water system serves twenty incorporated cities and fifteen unincorporated communities in Alameda and Contra Costa counties, approximately 1.3 million customers within a 332 square-mile area.¹⁵⁸ EBMUD's principal water source is the Mokelumne River in the Sierra Nevada, diverted at Pardee Reservoir in Calaveras and Amador counties.¹⁵⁹ Although EBMUD has substantial water supplies, some of its rights have relatively junior status, and EBMUD serves one of the most populated and fastest-growing areas in northern California.¹⁶⁰

EBMUD has been a leader among California water providers on water and growth issues.¹⁶¹ Although EBMUD was not the first provider to impose a water neutral standard, the district appears to be the first in California to implement such a program in the context of large-scale development.¹⁶² As of March 2015 EBMUD had integrated offset fees for approximately five housing projects that

file with the *McGeorge Law Review*).

154. David Sneed, *Judge to Decide in April Whether to Suspend Paso Basin Ordinance*, SAN LUIS OBISPO TRIB. (Mar. 17, 2014), <http://www.sanluisobispo.com/2014/03/17/2976870/paso-groundwater-basin-pumping.html> (on file with the *McGeorge Law Review*).

155. *Paso Robles Water Integrity Network v. County of San Luis Obispo et al.*, No. CV13-8301, slip op. at 7-15 (San Luis Obispo Cnty. Ct. Jan. 12, 2015) (on file with the *McGeorge Law Review*) (rejecting claim that Article X section 2 limited the County of San Luis Obispo's ability to adopt a water demand offset ordinance and holding that "increased use of groundwater to irrigate additional acreage . . . would constitute, in the context of our current drought conditions, an unreasonable use of water").

156. Docket in *Steinbeck Vineyards #1, Lic. v. County of San Lois [sic] Obispo et al.*, No. 1-14-CV-265039, SANTA CLARA SUPERIOR COURT, <http://www.sccaseinfo.org> (follow "Civil Index Search by 'Case Number'" hyperlink; then search case number 114CV265039 (related case at 1-14-CV-269212) (last visited Mar. 31, 2015); see also Lavelle & Sneed, *supra* note 153).

157. *Id.*

158. EAST BAY MUNICIPAL UTILITY DISTRICT, URBAN WATER MANAGEMENT PLAN 2-1 (2010).

159. *Id.*

160. *Id.*

161. See, e.g., Kanouse & Wallace, *supra* note 14, at 148-52 (describing litigation over annexation of Dougherty Valley to EBMUD's service area and the development of SB 610 and 221).

162. *New Technology Reduces Home Water Use by 5 Percent*, E. BAY MUN. UTIL. DIST. (Jan. 14, 2014), <https://www.ebmud.com/about/news/releases/2014/01/14/new-technology-reduces-home-water-use-5-percent> (on file with the *McGeorge Law Review*) (indicating the EBMUD water saving program as the first to implement on a large scale).

required annexation into EBMUD's service area.¹⁶³ EBMUD originally required a 1:1 ratio, but later increased the ratio to 2:1 to account for uncertainty in implementation and enforcement.¹⁶⁴ EBMUD has not required water neutral for all new development or remodels within its service areas, although district regulations do allow imposition of conditions to promote water efficiency, including retrofits, in new development.¹⁶⁵ Instead, EBMUD has primarily applied the requirement to new developments seeking permission to enter the district's service area on a project-specific basis, with the goal of avoiding impacts to EBMUD's water supplies and existing customers and mitigating environmental impacts.¹⁶⁶

EBMUD's foray into water neutral began with a request, circa 2001, by several developers to newly annex a portion of a 1,200-home, mixed-use subdivision into EBMUD's service area.¹⁶⁷ The request triggered substantial community debate, and EBMUD ultimately agreed to serve the project only if the development provided water demand offsets.¹⁶⁸

EBMUD developed a detailed process for achieving water savings in the new development. The first step required assessing anticipated water use, as the project was originally proposed, and then considering where efficiency upgrades could provide cost-effective water-savings.¹⁶⁹ These upgrades ultimately resulted in a 20–30% reduction from a typical, comparable development.¹⁷⁰ The water use features and associated water demand of the development were summarized in a

163. Kanouse & Wallace, *supra* note 14, at 156–57. Wendt Ranch, Weidemann Ranch, The Meadows and the Camino Tassajara Integrated Project, the latter of which encompassed the Alamo Creek project and other projects totaling 1,400 homes by four developers. EBMUD has also required offsets for Gale Ranch project. East Bay Municipal Utility District, Fiscal Year 2015 Water Service Rates, Charges and Fees, EAST BAY MUN. UTIL. DIST., SCHEDULE N – WATER DEMAND MITIGATION FEES (effective Aug. 11, 2014), available at https://www.ebmud.com/sites/default/files/pdfs/schedn-081114_0.pdf (on file with the *McGeorge Law Review*).

164. *Id.*; EAST BAY MUN. UTIL. DIST., REGULATIONS GOVERNING WATER SERVICE TO CUSTOMERS OF THE EAST BAY MUNICIPAL UTILITY DISTRICT § 3D at 3-P (effective Jan. 28, 2003), available at https://www.ebmud.com/sites/default/files/pdfs/service_in_the_camino_tassajara.pdf (on file with the *McGeorge Law Review*) [hereinafter EBMUD § 3D] (“A Water Demand Mitigation Fee shall be sufficient to fund offsite conservation programs to offset Project water demand at a rate of 2:1, as determined by the District.”).

165. EAST BAY MUN. UTIL. DIST., REGULATIONS GOVERNING WATER SERVICE TO CUSTOMERS OF THE EAST BAY MUNICIPAL UTILITY DISTRICT § 31-A (effective July 1, 2003) available at https://www.ebmud.com/sites/default/files/pdfs/Section%2031%20Water%20Efficiency%20Requirements%20070113_0.pdf (on file with the *McGeorge Law Review*) (“The District will review applications for new standard services and determine the applicability of, and compliance with, water-efficiency requirements. Applicants for expanded service shall be required to meet the water-efficiency requirements for all new water service facilities and may be required to retrofit existing water service facilities or uses to comply with these requirements.”).

166. See EBMUD § 3D, *supra* note 164, at 3-O; Kanouse & Wallace, *supra* note 14, at 158; see Ensuring Water Neutral Demand Powerpoint, *supra* note 19.

167. Kanouse & Wallace, *supra* note 14, at 157.

168. Kanouse & Wallace, *supra* note 14, at 157–58.

169. *Id.* at 158–60.

170. *Id.* at 162.

water budget for the project as a whole.¹⁷¹ Each lot size was also assigned a water budget.¹⁷² Offsets were assigned at a 2:1 ratio, and, based on this information, EBMUD staff calculated the cost of undertaking an offset action.¹⁷³ The total cost was charged to the new development as a “water demand mitigation fee.”¹⁷⁴ EBMUD used the fee within its existing service area to finance fixture retrofits, irrigation controllers, recycled and greywater systems, and sub-metering of new family units, as well as efficiency measures in the commercial and industrial sectors.¹⁷⁵

EBMUD then took an additional step that is uncommon among California water neutral programs; the district required that new developments form homeowner’s associations (HOAs) charged with ensuring that the new developments stay within their water budgets.¹⁷⁶ Each HOA was required to adopt covenants, conditions, and restrictions (CC&Rs) that would apply to the HOA itself and to individual lot owners.¹⁷⁷ Water use information was conveyed to EBMUD and the HOAs,¹⁷⁸ and HOAs were required to ensure that each development stay within its water budget.¹⁷⁹ If water consumption exceeded the budget by 20% or more in a year, the HOA would be charged an additional mitigation fee to EBMUD.¹⁸⁰ The HOA could pay the fee out of its dues or charge individual homeowners exceeding their lot budgets, at the HOA’s option.¹⁸¹ In another unusual move, EBMUD was identified as a third-party beneficiary of the CC&Rs, so that they could not be altered without EBMUD’s consent.¹⁸²

Soquel Creek Water District (SCWD). SCWD is located on Monterey Bay, near the City of Santa Cruz, approximately eighty miles south of San Francisco.¹⁸³ SCWD serves approximately 38,000 mostly residential customers in four service areas within Santa Cruz County.¹⁸⁴ SCWD’s water supply is derived from two groundwater aquifers.¹⁸⁵ Like many water purveyors in the coastal areas

171. *Id.* at 158, 160–62.

172. *Id.* at 158–60.

173. *Id.*

174. *Id.* at 160–62.

175. *Id.*

176. *Id.*; see Maddaus et al., *supra* note 15, at 109.

177. Kanouse & Wallace, *supra* note 14, at 160–62; Maddaus et al., *supra* note 15, at 107.

178. Kanouse & Wallace, *supra* note 14, at 161 (CC&Rs required lot owners to consent to release of their water use information by EBMUD to the HOA as a condition of accepting the property deed); Maddaus et al., *supra* note 15, at 107.

179. Kanouse & Wallace, *supra* note 14, at 160–62; Maddaus et al., *supra* note 15, at 109.

180. Kanouse & Wallace, *supra* note 14, at 160–62; Maddaus et al., *supra* note 15, at 109.

181. Telephone Interview with Randelee Kanouse, former consultant, EBMUD (June 2013) (notes on file with the *McGeorge Law Review*) [hereinafter Kanouse Interview].

182. Kanouse & Wallace, *supra* note 14, at 161–62.

183. SCWD RESOLUTION NO. 03-31, *supra* note 28, at 2-12.

184. *Id.* at 2-13.

185. *Id.* at 4-2.

of California, SCWD is battling seawater intrusion into these aquifers; as water levels in the aquifers drop, salt levels increase.¹⁸⁶

SCWD has one of the best-documented water neutral programs in the California sample described in this Article. SCWD adopted its first water neutral policy in 2003.¹⁸⁷ SCWD's 2003 Water Demand Offset Policy required new development to offset water use by 120% (a ratio of 1.2:1). SCWD's stated purpose was to avoid a development moratorium and to protect the groundwater supply until a supplemental water supply became available; the policy specifies that it will be discontinued once sufficient supply is available or when there are no further opportunities for offsets, whichever occurs first.¹⁸⁸ When the program started, developers were in charge of facilitating the retrofits; however, when the economy declined and development slowed, customers expecting retrofits had yet to receive them.¹⁸⁹ SCWD modified the policy in 2009 by requiring an offset fee for new development, which the district used to purchase high-efficiency fixtures, hire contractors, and manage the installations.¹⁹⁰ According to the district, the retrofit program resulted in a savings of 146 acre-feet per year.¹⁹¹ The district later revised its policy to require 160% offsets, a ratio of 1.6:1, and in 2013 increased the requirement to 2:1.¹⁹²

SCWD's retrofits have been primarily limited to residential toilets.¹⁹³ At program inception, developers were responsible for actual installation of the retrofits; SCWD later developed a credit system under which credits could be purchased from the district.¹⁹⁴ For direct installs, developers have been responsible for ensuring that retrofits are performed by licensed and bonded contractors and are properly completed.¹⁹⁵ Developers were required to provide retrofit candidates with a letter that explains the program, and both developers and participating customers must sign a release of liability that absolves SCWD of responsibility for retrofit issues.¹⁹⁶ The customer selected their own appliance

186. *Id.* at 4-7.

187. SCWD's program was developed based on the City of San Luis Obispo's program. Telephone Interview with Ron Duncan, Conservation & Customer Service Field Manager, Soquel Creek Water District (June 4, 2014) (notes on file with the *McGeorge Law Review*) [hereinafter Duncan Interview]; cf. WESTERN RESOURCE ADVOCATES, *supra* note 54 (describing City of San Luis Obispo's program).

188. See SOQUEL CREEK WATER DISTRICT, URBAN WATER MANAGEMENT PLAN 2010, at 6-33 (2010) http://www.soquelcreekwater.org/sites/default/files/documents/Reports/uwmp-final-master-oct7_0.pdf (on file with the *McGeorge Law Review*) [hereinafter SCWD 2010 PLAN].

189. *Id.*

190. *Id.*; *Water Demand Offset Program*, SOQUEL CREEK WATER DISTRICT, <http://www.soquelcreekwater.org/conserving-water/water-demand-offset-program> (last visited Mar. 28, 2015) [hereinafter *SCWD Water Demand Offset*] (\$18,000 per acre foot in 2010 increased to \$55,000 per acre foot in 2014).

191. See SCWD 2010 PLAN, *supra* note 188, at 6-33.

192. See *SCWD Water Demand Offset*, *supra* note 190; SOQUEL CREEK WATER DIST., RESOLUTION 13-17 (July 9, 2013).

193. SCWD 2010 PLAN, *supra* note 188, at 6-29.

194. *Id.*

195. *Id.*

196. Memorandum for Soquel Creek Water District Board of Director on Agenda Item 5.1, at 3 (Oct. 1,

for retrofit, and the resultant savings were documented on a form signed by both developer and customer, which was submitted to SCWD for approval.¹⁹⁷ Upon completion of new development and installation of measures qualifying for offset credit, SCWD staff conducted an inspection to verify compliance.¹⁹⁸

As of 2010, SCWD reported that approximately 3,450 high-water use toilets had been replaced,¹⁹⁹ saving an estimated 134 acre-feet of water per year.²⁰⁰ An additional twelve acre-feet per year was saved as a result of urinal, showerhead, and faucet retrofits.²⁰¹

SCWD's offset program also offers a green-building option called the "Go Green" program, which encourages developers to design their projects with higher-efficiency fixtures and more efficient landscaping than required by SCWD, and thus lower their ultimate offset requirement. Developers participating in this program may apply to receive SCWD-specified credit reductions, or may propose credit reductions for commercial development based on estimated water savings. Developers must first agree to install ultra-efficiency toilets before receiving credit for additional measures. SCWD estimates that the Go Green program facilitates reductions in water usage up to 15%.

In June 2014, SCWD proposed to amend the Water Demand Offset Program to address two concerns about the program.²⁰² The first concern was that offsets were causing water demand to "harden," i.e., that efficiency improvements in the short-term were using up conservation opportunities, thus precluding future efficiency improvements and conservation measures.²⁰³ The second concern was that development was taking advantage of the lowest-cost offsets in the near-term, thus forcing existing customers to pay higher costs to undertake efficiency improvements in the long-term.²⁰⁴ To address these issues, SCWD proposed to

2013), in SOQUEL CREEK WATER DISTRICT, BOARD AGENDA PACKET, at 103 (Oct. 1, 2013), available at <http://www.soquelcreekwater.org/sites/default/files/documents/board-meeting/packets/10-01-13%20Board%20Packet.pdf> (on file with the *McGeorge Law Review*).

197. *Id.*

198. *Id.*

199. "Conservation literature and staff estimates indicate that replacement of a commercial 3.5 [gallons per flush] toilet with an [Ultra Low Flow Toilet] is assumed to save 0.035 afy, and replacement of a commercial 3.5 [gallon per flush] toilet with a [high efficiency toilet] is estimated to save 0.042 afy." SCWD 2010 PLAN, *supra* note 188, at 6-32.

200. *Id.* This saving is on a "net" basis, meaning that the savings represent the difference between the former higher-flow models and the new lower-flow models. *Id.*

201. *Id.*

202. Memorandum for Soquel Creek Water District Board of Director on Water Demand Offset (WDO) Program, at 1 (June 3, 2014), in SOQUEL CREEK WATER DISTRICT, BOARD AGENDA PACKET, at 264 (June 3, 2014), available at http://www.soquelcreekwater.org/sites/default/files/documents/board-meeting/packets/06-03-14_Board_Packet_.pdf (on file with the *McGeorge Law Review*) [hereinafter June 2014 SCWD Water Demand Offset Memo].

203. *Id.*

204. *Id.* SCWD noted that "demand hardening" might not occur as anticipated "because it would be several years out (e.g., 10 years) before the more expensive methods are implemented and during this time, it is expected that new water-saving devices, regulations, etc. will be developed . . .". *Id.* at 4.

require developers to undertake more expensive offsets, such as turf replacements, or to charge a fee that SCWD would use for more comprehensive offset projects, such as rainwater harvest and recharge.²⁰⁵

On June 17, 2014 SCWD amended the program so that all water intensifying uses satisfy offset requirements by paying a fee equivalent to \$55,000 per acre foot of offset.²⁰⁶ This appears to have been done in part to avoid imposition of a building moratorium as a result of limited water supplies.²⁰⁷ SCWD designed the fee to reflect the cost of “achieving actual water savings for existing customers through retrofits.”²⁰⁸ Fee revenue will be used to retrofit fixtures at public schools within SCWD’s service area; according to SCWD, these retrofits that otherwise would be difficult to achieve due to limited school funds.²⁰⁹

B. Non-California Programs

Water neutral development programs are being adopted around the United States and the world. This article does not attempt an exhaustive survey of such programs,²¹⁰ but describes some examples below to illustrate the purpose and scope of such programs for comparative purposes. Some of the programs contain elements that could be incorporated into future California programs.

Santa Fe, New Mexico. The City of Santa Fe has developed an extensive regulatory framework for its water neutral program.²¹¹ With a population of approximately 70,000,²¹² the City of Santa Fe is, like most cities in the arid west, grappling with the need to match limited water supplies to growth.²¹³ In 2003,

205. *Id.* at 3–5; Duncan Interview, *supra* note 187.

206. *SCWD Water Demand Offset*, *supra* note 190; *see also* Minutes, Regular Meeting of Soquel Creek Water District, at 9 (June 17, 2014), in SOQUEL CREEK WATER DISTRICT, BOARD AGENDA PACKET, at 104 (July 15, 2014), available at http://www.soquelcreekwater.org/sites/default/files/documents/board-meeting/packets/07-15-14_board%20packet_secured.pdf (on file with the *McGeorge Law Review*) [hereinafter SCWD June 17, 2014 Meeting Minutes] (containing draft meeting minutes for June 17, 2014 that noted passage of motion to adopt new offset fee).

207. *See Declaration of Connection Moratorium*, Powerpoint Presentation at Special Meeting of Soquel Creek Water District, at 3 (June 3, 2014), in SOQUEL CREEK WATER DISTRICT, BOARD AGENDA PACKET, at 92 (July 15, 2014), available at http://www.soquelcreekwater.org/sites/default/files/documents/board-meeting/packets/07-15-14_board%20packet_secured.pdf (on file with the *McGeorge Law Review*); June 2014 SCWD Water Demand Offset Memo, *supra* note 202.

208. *SCWD Water Demand Offset*, *supra* note 190.

209. *Id.*

210. Additional non-California programs are identified at *supra* note 54.

211. SANTA FE, N.M., CITY CODE § 14-8; 25 SANTA FE, N.M., CITY CODE § 9.4; *see* Administrative Procedures for Water Demand Offset Requirements (Exhibit A) (Res. No. 2010-20) (Mar. 31, 2010); *see also* Bates, *supra* note 5, at 87 (describing Santa Fe’s water neutral program); Sandra Zellner, *Symposium: Collaboration and the Colorado River: The Anti-Speculation Doctrine and Its Implications for Collaborative Water Management*, 8 NEV. L.J. 994, 1015–16 (Spring 2008) (referencing Santa Fe’s water neutral program).

212. *Santa Fe, New Mexico: Why We’re Watching*, ONLINE CODE ENFORCEMENT AND ADEQUACY NETWORK, <http://energycodesocean.org/tenplaces/Santa%20Fe> (last visited July 29, 2014) (on file with the *McGeorge Law Review*).

213. *Id.*; *see generally* A. Dan Tarlock & Sarah Bates, *Western Growth and Sustainable Water Use: If*

Santa Fe concluded that the city would be unable to supply sufficient water to meet city-wide demand, and adopted a water neutral ordinance requiring toilet retrofits for new development.²¹⁴ This retrofit program was succeeded by a more comprehensive water neutral program in 2009, which requires that “the impact of proposed new development be offset either through conservation in existing development or transfer of water rights to the city.”²¹⁵

Santa Fe’s detailed water neutral program includes water conservation credits, water rights transfers, development water budgets, a city water budget, and a city water bank.²¹⁶ In this program, only small projects requiring ten acre-feet per year or less are eligible for conservation credits (i.e., retrofit credits). To obtain an offset requirement, a proposed development must have a water budget approved by the city.²¹⁷ The development can dedicate conservation credits to the city’s water bank, acquired by participating in retrofits or paying an in-lieu fee.²¹⁸ The offset fees are based on the city’s water rights purchase price plus administrative and due diligence fees; in 2010, the city’s water price was approximately \$15,000 per acre-foot plus \$2,600 in fees.²¹⁹

Residential projects requiring more than ten acre-feet per year are required to participate in the city’s water rights transfer program. Water rights can be transferred to a particular development, or into the city’s water bank.²²⁰ The applicant pays a deposit toward a due diligence investigation by the city, during which the city determines whether the water rights are acceptable.²²¹ If they are accepted, the city and the applicant cooperate in a petition to the state engineer to transfer the water rights to the city’s point of diversion.²²² The applicant is responsible for administrative and hearing costs associated with the change.²²³

Weymouth, Massachusetts. The Town of Weymouth developed a water neutral program to ensure that the town would not exceed its authorized water withdrawal while also accommodating new development.²²⁴ The program requires

There Are No “Natural Limits,” Should We Worry About Water Supplies? 38 ENVTL. L. RPTR. 10582 (2008) (describing western efforts to match limited water supplies to growth).

214. A. Dan Tarlock & L. Lucero, *Water Supply and Urban Growth in New Mexico: Same Old, Same Old or a New Era?*, 43 NAT. RESOURCES J. 803, 824 (2003).

215. SANTA FE, N.M., CITY CODE §14-8.13 (2010).

216. *Id.* §§ 25-9.5; 25-10; 25-11; 25-12 (2010).

217. *Id.* § 14-8.13(B)(2) (2010) (requiring that water budgets be based on either standard formulas using historical data for similar types of development or a reliable alternative approach that results in a lower estimate).

218. *Id.* § 14.8.13(A)(2).

219. SANTA FE, N.M., ORDINANCE 2009-38 § 1.3.6 (2010).

220. Water rights must be submitted with proof of ownership, title report, permits/licenses/court orders, copy of relevant options or agreements, and an affidavit that the rights are free from encumbrances. *Id.* at § 3.3.6.

221. *Id.* § 3.3.6(j)–3.4.1.

222. *Id.* § 3.6.1.

223. *Id.* § 3.6.4.

224. *Water System*, WEYMOUTH, MASSACHUSETTS (June 21, 2014), <http://www.weymouth.ma.us/water-sewer/pages/water-system> (on file with the *McGeorge Law Review*).

that new development, including existing customers that seek to increase water use, to offset use at a 2:1 ratio through fixture and irrigation system retrofits or in-lieu fees.²²⁵

Weymouth provides a list of existing businesses and residences eligible for retrofit. At the program's inception, applicants were responsible for retrofits; in 2000, the program was expanded to give applicants the option of paying an in-lieu fee.²²⁶ The fee is held in a dedicated enterprise fund which is used to pay for the identified conservation activities.²²⁷ Conservation beyond a 2:1 ratio may be deposited in the Weymouth water bank.²²⁸ Although affordable housing is required to comply, the policy provides a hardship exemption for individual homeowners.²²⁹ According to a 2012 summary, the Weymouth program has conserved 1.2 million gallons a day. In describing the program, the State of Massachusetts reported in 2012 that the program "has not had a negative impact on development, which remains robust."²³⁰

Massachusetts Water Conservation Standards. In 2012, the state of Massachusetts issued a "Water Conservation Standards" document ("Plan") that recommends water neutral measures including offsets, stormwater recharge, and other methods, as techniques for protecting supply reliability, accommodating growth, and protecting the environment.²³¹ The Plan refers to water neutral measures as "water banking," and specifically explains that although the term "water bank" in the western states generally references to a program for "valuing, trading, buying or selling water rights," in Massachusetts, the term generally means "a system of accounting and paying for measures that offset or mitigate water losses due to water withdrawals, sewerage, and/or increased impervious areas that prevent aquifer recharge."²³² The Plan highlights several core principles

225. *Id.*; see also Wilson, *supra* note 54 (describing Weymouth, MA 2:1 offset requirement); Anderson, *supra* note 26.

226. Anderson, *supra* note 26.

227. THE COMMONWEALTH OF MASS. EXEC. OFFICE OF ENERGY AND ENVTL. AFFAIRS & WATER RESOURCES COMMISSION, WATER CONSERVATION STANDARDS 44 (2012), available at <http://www.mass.gov/eea/docs/dcr/watersupply/intbasin/waterconservationstandards.pdf> (on file with the *McGeorge Law Review*) [hereinafter MASS. WATER CONSERVATION STANDARDS].

228. *Id.*

229. *Id.*

230. *Id.*

231. *Id.* at 9, 43.

The primary goals of a water bank are to balance the water budget, reduce water losses, increase water efficiency, and keep water local. There is no 'one size fits all' approach, and municipalities should have the flexibility to adopt a program that best fits their particular circumstances. . . . A water-banking program can free up water and ensure that there is an adequate supply of water for competing uses—i.e., instream flow and habitat, recreation, wetlands, water supply, and economic development. It can mitigate, or offset, the impacts of water withdrawals, balance the water budget, assist in restoring and protecting instream flow, promote water conservation, and ensure an adequate supply of potable water. Massachusetts' communities are beginning to use this tool to accommodate future growth while ensuring the sustainability of their water resources.

232. *Id.*

for water neutral “banking” programs, including: (1) use of a dedicated fund, or banking mechanism; (2) programs should require at least a 2:1 offset ratio “in medium- and high-stressed basins;” (3) in-lieu fees must be reasonably related to the actual cost of the offset plus the program’s administrative costs; and (4) offsets implemented by developers must be documented and verified.²³³

The Massachusetts Plan recommends an offset ratio of at least 2:1 in part due to uncertainty in measurement and in implementation,²³⁴ and also because a 1:1 ratio merely protects the status quo in degraded watersheds. The Plan envisions offset options beyond fixture retrofits, including reduced infiltration and inflow, recharge of stormwater, and retrofit of existing development.²³⁵ Such options may include low-impact development principles, recycled water, groundwater recharge, xeriscaping, and installation of rainwater collection systems.²³⁶

The Massachusetts Plan differs from the California approach in its focus and breadth; California plans tend to be provider-centric, applying only to new water uses that impinge on a particular water supplier’s resources.²³⁷ The Massachusetts Plan suggests a focus on protecting watersheds rather than individual providers and would allow offsets to be created on a watershed or basin basis.²³⁸ The Plan specifically suggests that it is worth considering evolution of the approach into a banking and credit purchase system, involving multiple communities and organized on a regional or watershed basis.²³⁹ Moreover, whereas most California plans are fixture retrofit plans, the Massachusetts Plan envisions a broader range of supply enhancement and offset opportunities.

England. In 2007 and 2009, England’s Environment Agency issued a series of reports exploring the potential for the use of new development offsets as one element in a broader movement toward water efficiency.²⁴⁰ The report suggests that the ideal target would be a 1:1 offset, but that community conditions may support use of offsets even where 1:1 cannot be achieved, due to existing low per

233. *Id.*

234. *Id.* at 43–44 (“[r]atios ranging from 4:1 to 10:1 are typical”).

235. *Id.*

236. *Id.*

237. Compare SCWD 2010 PLAN, *supra* note 188, at 131 (focusing on keeping development water-neutral in order to avoid over-taxing individual water suppliers), with MASS. WATER CONSERVATION STANDARDS, *supra* note 227, at 44.

238. MASS. WATER CONSERVATION STANDARDS, *supra* note 227, at 44.

239. *Id.*

240. E.g., ENV’T AGENCY ET AL., TOWARDS WATER NEUTRALITY IN THE THAMES GATEWAY – SUMMARY REPORT (Nov. 2007), available at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/291668/scho107bnmc-e-e.pdf (on file with the *McGeorge Law Review*); VICTORIA ASHTON ET AL., ENV’T AGENCY, DELIVERING WATER NEUTRALITY: MEASURES AND FUNDING STRATEGIES (Oct. 2009), available at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/291739/scho1009bqzt-e-e.pdf (on file with the *McGeorge Law Review*); ANNE KELMO & ROB LAWSON, ENV’T AGENCY, WATER NEUTRALITY: AN IMPROVED AND EXPANDED WATER RESOURCES MANAGEMENT DEFINITION (Oct. 2009), available at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/291675/scho1009bqzr-e-e.pdf (on file with the *McGeorge Law Review*).

capita consumption and high efficiency.²⁴¹ The implicit conclusion is that requiring offsets is a better idea than not requiring offsets, because some benefits are better than none.²⁴²

C. Water Neutral Variants and Trends

Emergency Programs. Some California communities have identified demand offsets as a late-stage emergency drought measure, an option identified by the California Department of Water Resources in its 2008 Drought Handbook.²⁴³ The idea is that the water neutral requirement would be triggered by hydrologic conditions leading the water supplier to declare an emergency, which typically proceeds through approximately four management stages. Some suppliers identify water neutral as a future program that would be triggered by declaration of a stage three drought emergency.²⁴⁴

Assuming the program was fully formed at the time the emergency was declared, it is unclear how such programs would reconcile development timelines with drought periods, unless the emergency lasts for a number of years. The program would have to clarify which developments would be covered: those proposed during a drought emergency, those who seek permits during that period, or some other subset. The program would also have to clarify applicability if the emergency were to end before the development has been substantially planned, approved, or obtained building permits or other entitlements.

Watershed or Resource-Based Programs. Another variant is to include water neutral as a tool for integrated regional planning or protection of specific

241. ASHTON ET AL., *supra* note 240, at 49–50.

The aspiration for water neutrality should be to offset 100 per cent of the predicted increase in consumption from the new development. However, the potential for offsetting may be reduced in some areas (for example, where metering levels are already high, or the area already has a high level of water efficiency activity and low per capita consumption), in these areas, there may be a case for setting the water neutrality target below 100 per cent.

242. *Id.* (noting that realistic offset goals may be less than one hundred percent).

243. 2008 URBAN DROUGHT GUIDEBOOK, *supra* note 39, at 76; *see also* VICTORVILLE WATER DISTRICT, 2010 URBAN WATER MANAGEMENT PLAN § 8.2.1 at 8-3 (2011) [hereinafter VWD 2010 PLAN] (identifying offset program as potential emergency drought measure); CITY OF CAMARILLO, CAL. MUNICIPAL CODE § 14.12.040(D)(5) (during Stage 4 water emergency, unless building permit already issued or project is necessary to protect health, safety and welfare, then no new potable water service, meters or will-serve letters will be issued unless “applicant provides substantial evidence of an enforceable commitment that water demands for the project will be offset prior to the provision of a new water meter . . .”) (based on URGENCY ORDINANCE NO. 1039 (2009)); CITY OF SAN JACINTO ORDINANCE NO. 09-16, § H.2.c (adopting water demand offset program for Stage 3 water emergency); CITY OF CLOVIS, 2005 URBAN WATER MANAGEMENT PLAN 49 (2005) [hereinafter 2005 CLOVIS PLAN] (in Stage 3 emergency, “[n]o new connections are allowed unless the developer can offset the new expected water use by a two to one water savings in existing development”); *see also* CAL. WATER CODE §§ 350 et seq. (authorizing declaration of a water shortage emergency).

244. *E.g.*, CITY OF SAN JACINTO, CAL., ORDINANCE NO. 09-16 § H.2.c; 2005 CLOVIS PLAN, *supra* note 243, at 48.

water resources, such as a river or groundwater system.²⁴⁵ Regional planning efforts could consider whether it is feasible and desirable to include water neutral goals and objectives as common participant goals. Inclusion in regional plans might facilitate a new version of water neutral, in which the focus is on rivers and watersheds rather than the portfolio of a single water supplier. This approach could potentially have larger water resource sustainability benefits than a program that focuses on a single water supplier's disparate sources.

In-Lieu Fees and Impact Fees. Many of the above-described water neutral programs allow developers to pay an "in-lieu" fee instead of undertaking retrofits. As a variant, some jurisdictions rely solely on such a fee, which is deposited in a dedicated fund from which the water supplier pays for various conservation programs, including retrofits.²⁴⁶ Whether a fee is an option within a larger program, or the total program, fees have a few characteristics. Fees provide an opportunity to aggregate resources that might be used to generate greater conservation savings than piecemeal projects.²⁴⁷ They shift the burden from carrying out conservation programs from an individual developer to a water supplier, which has both positive and negative aspects.²⁴⁸

Depending on the design of the water neutral program, fees may be classified as in-lieu fees, mitigation fees, or impact fees.²⁴⁹ Regardless of what they are called, there are a couple of general approaches. Some fees are tailored to the specific details of a development, and adjusted depending on design choices made for the development.²⁵⁰ The detailed approach may involve calculation of a unique water budget for each structure or categories of structures.²⁵¹ Other fees calculate the cost of undertaking a conservation program or programs, then

245. 2012 RMC WATER PLAN, *supra* note 54, at 3-3, 3-6 to -7 (adopting demand offset programs as regional objective for participating suppliers).

246. *See* FOLSOM, CAL., CITY CODE § 13.30.10 et seq.; CITY OF SANTA MONICA, CAL., ORDINANCE NO. 1571 (1991) (adopting Water Demand Mitigation Fee program); CITY OF SANTA MONICA RESOLUTION NO. 8196 (CCS) (1991) (setting the fee).

247. *See* CITY OF SANTA MONICA, STAFF REPORT 1 (2014).

The Water Demand Mitigation Fee generates approximately \$300,000 annually. The amount varies depending on how many new construction and remodel projects are permitted each year. With the clarification of the appropriate uses, the Water Demand Mitigation Fee by 2020 could generate a total of approximately \$2,100,000. These funds could help offset water-efficient related public facility capital improvement projects, that would likely account for greater level of water reduction than if solely used for toilets, showers, and faucets.

248. WATER OFFSET POLICIES, *supra* note 54, at 3 (noting that fee programs shift the burden to the supplier to ensure, among other things, that fees must be proportional to the new demand, disbursed cost-effectively, and expended timely so as to actually offset the new demand); *see also id.* (noting that City of Lompoc fees were discontinued because funds were not expended fast enough).

249. U.S. ENVTL. PROT. AGENCY, *Wetlands Conservation*, www.epa.gov/owow/wetlands/pdc/CMitigation.pdf (last visited Sept. 13, 2014) (on file with the *McGeorge Law Review*) (describing types of water conservation fees).

250. *See, e.g.,* Wilson, *supra* note 54.

251. *Id.*

spread that cost among anticipated growth.²⁵² Under this approach, new development is charged a per-structure fee, typically based on the size of the connection.²⁵³

Each of these approaches has pros and cons. Fees specific to a development theoretically create an incentive for new development to adopt aggressive or innovative conservation measures, sometimes called “extraordinary” measures.²⁵⁴ They also create an opportunity to design a program that monitors water use and imposes penalties or forces reductions for exceeding budget.²⁵⁵ General fees are more straightforward for the water supplier to the extent that resources are not required to assess each new development; instead, resources are devoted to the conservation programs themselves.²⁵⁶ This second fee category is also more straightforward for the developer, avoiding the investment of time on the part of the developer to carry out the program.²⁵⁷

Credit Banking. Credit banking may be an aspect of some water neutral programs. Some water neutral programs track completed offsets as credits, and still others provide central repositories or “banks” for those credits so that they may be purchased or traded.²⁵⁸ Developers can purchase credits from the bank in-lieu of undertaking direct retrofits. Sometimes the water supplier or land use authority may undertake conservation actions, which are then repaid by the purchase of credits by new development. Banked credits may be traded between new developments, or may allow development interests to purchase credits ahead of project proposals.²⁵⁹ This market system can create incentives and efficiencies, but can also lead to claims of credit hoarding and speculation.²⁶⁰

252. *Id.*

253. *Id.*

254. *Id.*

255. *Id.*

256. U.S. ENVTL. PROT. AGENCY, *Wetlands Conservation*, www.epa.gov/owow/wetlands/pdc/CMitigation.pdf (last visited Sept. 13, 2014) (on file with the *McGeorge Law Review*) (describing types of water conservation fees).

257. *Id.*

258. See Anderson, *supra* note 26, at 57; cf. MONTEREY PENINSULA WATER MGMT. DIST., ORDINANCE NO. 156 (2013) (An Ordinance of the Board of Directors of the Monterey Peninsula Water Management District Clarifying and Amending Terms and Procedures Related To Water Permits, Water Use Credits, Rebates and Landscape Water Audits) (Nov. 28, 2013) (district inspects each home and sets the number of fixture units assigned to that home, and these fixture units translate into credits; a home with substantial water fixtures has more credits for future remodels).

259. See *Save Our Carmel River v. Monterey Peninsula Water Management Dist.*, 141 Cal. App. 4th 677 (2006) (each city within MPWMD’s jurisdiction is assigned a specific quantity of water as a credit allocation and new development must obtain water from the city’s allocation; cities may transfer credits between themselves); see also MONTEREY PENINSULA WATER MGMT. DIST., ORDINANCE NO. 52 (1990).

260. Jessica Lyons, *Four Defiant Members of the Monterey Peninsula Water Board Have Made Enemies in High Places*, MONTEREY COUNTY WKLY., May 9, 2002, http://www.montereycountyweekly.com/news/local_news/article_ca07f599-ba85-584e-9735-1d91b57a8eb7.html (on file with the *McGeorge Law Review*); WESTERN RESOURCE ADVOCATES, *supra* note 54, at 4.

IV. PRACTICAL AND POLICY ISSUES, CHALLENGES AND OPPORTUNITIES FOR CALIFORNIA WATER NEUTRAL PROGRAMS

This section provides a reconnaissance look at practical and policy issues that have been raised about water neutral programs. Water suppliers contemplating water neutral programs should consider these issues as part of their assessment. Existing programs should consider these issues as part of improving and expanding their programs.

A. *Retrofit Saturation*

As described herein, the first wave of California water neutral programs appear to have focused primarily on fixture retrofits, particularly toilets, due to the potential for a relatively large volume of savings. However, all retrofit programs eventually experience saturation, i.e., the point at which most existing eligible fixtures have been replaced with high efficiency models.²⁶¹ A saturation rate between 75% and 90% appears to be the levels at which suppliers conclude that remaining water savings do not justify the cost of further retrofits.²⁶² Saturation at these levels has already occurred in a few communities in the sample,²⁶³ and will likely occur in others.²⁶⁴ Saturation may be a problem for water neutral programs that focus exclusively on indoor fixture retrofits; such programs must either integrate new approaches to saving water or end.²⁶⁵

261. See, e.g., BLANCO ET AL., *supra* note 51, at 208–09, 211 (discussing retrofit saturation in southern California service areas).

262. Duncan Interview, *supra* note 187; see BLANCO ET AL., *supra* note 51, at 208–09; cf. *Water Retrofit Upon Sale Repealed*, CITY OF SANTA MONICA (last updated July 1, 2013), http://www.smgov.net/departments/osc/categories/water/retrofit_upon_sale.aspx (on file with the *McGeorge Law Review*) [hereinafter *Water Retrofit*] (City of Santa Monica repealed retrofit on sale program in June 2013 due to 92% saturation).

263. CAMBRIA COMMUNITY SERVS. DIST., CAMBRIA URBAN WATER MANAGEMENT PLAN 6-2 (2010) (88% saturation); see *Water Best Practice: Water Demand Offsets, Soquel, CA*, GREEN CITIES CALIFORNIA, (last visited July 29, 2014), http://greencitiescalifornia.org/best-practices/water/soquel_water-demand-offsets.html (on file with the *McGeorge Law Review*) (based on City of San Luis Obispo experience, 85% retrofits would be considered saturated); CITY OF L.A. DEP'T OF WATER & POWER, SECURING L.A.'S WATER FUTURE 12–13 (May 2008), available at http://www.greencitiescalifornia.org/assets/water/LA_Emergency-Water-Conservation-Plan_Water-Supply-Report-2008.pdf (on file with the *McGeorge Law Review*) [hereinafter SECURING L.A.'S WATER FUTURE] (noting that toilet retrofit program ended in 2006 due to saturation and demonstrated effectiveness of city's retrofit on resale ordinance, prompting city to focus on reducing outdoor water use); cf. *Water Retrofit*, *supra* note 262 (92% saturation).

264. BLANCO ET AL., *supra* note 51, at 208–09 (predicting 75% saturation rate for indoor residential, commercial, institutional and industrial retrofits by 2020). It is not clear whether this prediction is specific to southern California, which generally undertook retrofits earlier than northern California, or whether the predicted saturation accounts for potential gaps in SB 407 compliance, described in section IV(B). *Id.*

265. See SECURING L.A.'S WATER FUTURE, *supra* note 263, at 12–13 (noting that toilet retrofit program ended in 2006 due to saturation and demonstrated effectiveness of city's retrofit on resale ordinance, prompting city to focus on reducing outdoor water use). *But see infra* Part IV.E (discussing the potential for a lack of real water savings where fixture retrofit occurs as a result of mandatory conservation requirements).

Although each program must be individually assessed, it appears that, generally, water neutral programs have the potential to find new savings beyond fixture retrofits. This conclusion is based on at least three considerations. First, for early water neutral programs created circa 1980s–1990s that focus on retrofits, sufficient time has passed that technological advances in water fixtures may provide opportunities for additional savings, i.e., through retrofit of retrofits.²⁶⁶ Although the savings from secondary retrofits will be relatively smaller, at sufficient volumes such savings might be valuable from a water neutral perspective if they exceed mandatory minimum efficiency requirements.²⁶⁷ Second, and more importantly, outdoor water efficiency initiatives (e.g., installation of irrigation controllers or lawn replacement) represent a potentially significant area for new water savings, and these have not reached saturation.²⁶⁸ Third, technological and legal advances in areas such as rainwater harvest, graywater use, and stormwater capture, combined with an increasing marginal cost for water, will increase the potential to integrate new initiatives into water neutral programs.²⁶⁹ Although some of these programs may be costly at present,²⁷⁰ feasibility is likely to increase over time as water supplies become scarcer, and conservation technology and techniques continue to improve. One approach that has been suggested to address cost is to convert a retrofit program into an offset fee, and use the proceeds to fund new conservation initiatives that may not be affordable at the individual development level.²⁷¹

266. See Memorandum from Dean Kubani, Manager, Office of Sustainability and the Env't & Martin Pastucha, Dir., Pub. Works, Recommending Adoption of a Resolution Clarifying Uses of the Water Demand Mitigation Fees to City of Santa Monica City Council (Mar. 25, 2014), available at <http://www.smgov.net/departments/council/agendas/2014/20140325/s2014032503-F.htm> (on file with the *McGeorge Law Review*) (“However, advances in plumbing fixture technology, irrigation and landscaping have resulted in even more water-efficient products and processes that are not specifically named in the original staff report and resolution.”).

267. See *infra* Part IV.A (describing importance of exceeding mandatory minimum requirements); BLANCO ET AL., *supra* note 51, at 211 (noting that percent savings from second innovation is smaller than from the first innovation).

268. See AQUACRAFT, *supra* note 1, at 266; BLANCO ET AL., *supra* note 51, at 208–12.

269. WHOLLY H2O, GRAYWATER USE IN CALIFORNIA SINGLE AND MULTI-RESIDENTIAL UNITS: POTENTIAL BEST MANAGEMENT PRACTICES 46 (2012) (“research suggests that reusing all Tier 1 and Tier 2 [laundry, shower, dishwasher, faucet, washing machine] would be sufficient to meet 100% outdoor water use in Southern California.”); see MOJAVE WATER AGENCY, EVALUATING THE EFFECTIVENESS OF CASH FOR GRASS PROGRAMS 2, 16 (June 2011), available at http://mojavewater.granicus.com/MetaViewer.php?view_id=2&clip_id=78&meta_id=7028 (on file with the *McGeorge Law Review*) (concluding that turf replacement program between 2008 and 2010 was cost-effective means of saving 718 acre-feet per year); Maddaus et al., *supra* note 15, at 110 (offset measures will change as technology changes).

270. See, e.g., CAL. DEP'T OF WATER RES., CALIFORNIA WATER PLAN UPDATE 2009, at 11-10 to -11 (describing costs associated with recycled water).

271. *Trading New Development in Napa*, *supra* note 63 (“Due to the dwindling number of 3.5+ gpf toilets eligible for replacement, Napa may need to convert it to simply a water-offset fee (with the proceeds used for a broader range of conservation and supply enhancement activities). The City has gotten creative . . . with some large development projects funding recycled water conversions as their offset method rather than toilet replacement.”); see Part III.C (discussing fee programs).

The feasibility of new types of offsets will vary by community and will change over time. One challenge associated with moving beyond toilet retrofits to other offset opportunities²⁷² is that retrofit of older toilets presents an opportunity for a relatively large volume of savings in a single transaction, with relatively little inconvenience to the homeowner and the water supplier.²⁷³ Other types of efficiency improvements may require a greater investment of time and expense, and likely a greater commitment to efficiency on the part of water suppliers, homeowners, and developers. Because offsets typically require improvements at several existing structures in order to earn sufficient credits for a new structure, larger communities may have an advantage over smaller communities. Relevant variables may include factors such as the amount of existing housing stock and existing degree of efficiency, local water use factors, community socio-economics, and the vitality of the housing and development market, including the ability to absorb the extra cost associated with water neutral programs.

B. Ensuring Wet Water: Mandatory Conservation Requirements

Water neutral programs must ensure that offsets result in real water savings. One concern is that where a developer's offset actions would have to be undertaken without the water neutral program, such as in the case of mandatory conservation requirements, there are no actual water savings associated with the program.²⁷⁴ The program would then result in the dual problem of incurring unnecessary implementation costs on the part of the water supplier, while also facilitating new development that might not otherwise be approved or supported by the community because of increased water demand.

Fixture retrofit programs may encounter this problem where retrofits or high efficiency fixtures are otherwise mandated by federal, state, or local law. Federal, state and local agencies impose efficiency standards for new fixtures and require retrofits under various laws. In 1991, a number of California water suppliers formed the California Urban Water Conservation Council, signing an MOU that pledged water savings through best management practices (BMPs), including toilet retrofits.²⁷⁵ BMPs were typically voluntary, but individual water suppliers

272. *Toilet Fixtures*, CAL. URBAN WATER CONSERVATION COUNCIL, <https://www.cuwcc.org/Resources/Product-Information/Toilet-Fixtures> (last visited Mar. 31, 2015) ("Toilet fixture replacement represented one of the most popular water efficiency initiatives of the 1990s, as drought conditions motivated water providers to implement water conservation programs.").

273. *Is Water Policy Limiting Residential Growth?*, *supra* note 3 (indoor plumbing retrofits are the "low hanging fruit" of water conservation); *cf.* 2013 DWR WATER PLAN UPDATE, *supra* note 4, at 2 ("Residential toilet retrofits have had the greatest impact on urban water use, accounting for almost half of all BMP water savings through 2004.").

274. Duncan interview, *supra* note 187.

275. *Memorandum of Understanding (MOU)*, CAL. URBAN WATER CONSERVATION COUNCIL (Sept. 17, 2014), <https://www.cuwcc.org/About-Us/Memorandum-of-Understanding> (on file with the *McGeorge Law*

could choose to mandate the measures. Fixture efficiency standards became mandatory at both the federal and state level in 1991–1992, with California’s SB 1224²⁷⁶ and the federal Energy Policy Act of 1992,²⁷⁷ which required that fixtures meet mandatory efficiency standards after 1994. California efficiency standards were upgraded in 2007,²⁷⁸ and subsequently incorporated into California’s innovative building code, CALGreen,²⁷⁹ CALGreen mandates high-efficiency fixtures in, among other things, new low-rise residential construction after January 1, 2014.²⁸⁰

The foregoing laws applied to new construction, but not to pre-1994 structures.²⁸¹ To address the gap, California enacted SB 407 in 2009.²⁸² SB 407 amended the Civil Code to require that, on or after January 1, 2014, all properties constructed before January 1, 1994 meet specified high efficiency standards for water fixtures such as toilets, faucets, and urinals.²⁸³ SB 407 requires that noncompliant plumbing fixtures in all single-family residential property be replaced with water-conserving fixtures on or before January 1, 2017.²⁸⁴ Multi-family housing and commercial properties must comply by January 1, 2019.²⁸⁵ These standards are enforced when developers seek building permits or other approvals for new or intensified water uses, as defined.²⁸⁶

In addition to state-imposed requirements, cities and counties may also require mandatory retrofits and installation of high-efficiency fixtures through

Review) (agreeing to implement “Best Management Practices” or BMPs, including toilet retrofits, to achieve water use efficiency).

276. The first state-level mandatory water efficiency law in the United States, SB 1224, Ch. 1347 (1992), required all toilets and urinals sold or installed January 1, 1994 to use no more than an average of 1.6 gallons and 1 gallon per flush, respectively. SB 1224, 1992 Leg., 1991–1992 Reg. Sess. (Cal. 1992).

277. Energy Policy Act of 1992, H.R. 776, 102nd Cong. (1992).

278. CAL. HEALTH & SAFETY CODE §§ 17921.3, 17921.4 (West 2009), § 17921.5 (West Supp. 2014), § 18944.11 (West Supp. 2014).

279. Part of the California Building Standards Code, CALGreen was the first state-level mandatory green building code in the U.S. Part 11 of Title 24, Cal. Building Standards Code. CALGreen requires all local governments to adopt the mandatory provisions of the Code. The standards in the 2013 CALGreen Code are prescriptive standards with specific water use criteria pursuant to the Health and Safety Code. See CALGREEN, GUIDE TO THE 2013 CALIFORNIA GREEN BUILDING STANDARDS CODE RESIDENTIAL 25–27 (2013), available at http://www.hcd.ca.gov/codes/sh/CALGreen_Guide_REV_12-13.pdf (on file with the *McGeorge Law Review*)

280. CAL. CIV. CODE § 4.303 (discussion water efficiency and conservation, indoor water use, and mandatory requirements for residential dwellings).

281. Energy Policy Act of 1992, H.R. 776, 102nd Cong. (1992).

282. CAL. CIVIL CODE § 1101 (West 2009).

283. *Id.* § 1101.2, 1101.3(c) (standards).

284. *Id.* § 1101.4(b). See generally Informational Bulletin from the Department of Housing and Community Development to Local Code Agencies on Senate Bill 407 (Dec. 3, 2013), available at http://www.hcd.ca.gov/codes/sh/infobulls/IB_2013-07_SHL.pdf (on file with *McGeorge Law Review*).

285. CIV. § 1101.5(a) (West Supp. 2006). On or after January 1, 2014, multi-family and commercial property must meet fixture standards when making certain identified additions and improvements. *Id.* § 1101.5(d).

286. *Id.* §§ 1101.1–1101.8.

local ordinances.²⁸⁷ Local ordinances may sometimes exceed the requirements of state law.²⁸⁸ New local water efficiency ordinances and mandatory efficiency requirements have been indirectly encouraged by California's 2009 statewide mandate to reduce per capita water use by 2020.²⁸⁹

As a result of SB 407, CALGreen, and other fixture efficiency laws, the percentage of water savings that can properly be credited to new development will decrease, because if the retrofit would have occurred absent the water neutral program, then there is no appreciable water savings.²⁹⁰ The question for water neutral programs is whether mandatory requirements cover all possible efficiency improvements, and whether the requirements will translate into action.²⁹¹ If the efficiency law does not encompass all uses, or if enforcement models create timing or coverage gaps in compliance, then there may be an opportunity for water neutral savings.²⁹² Although typically these savings would be considered temporary, such temporary savings can be significant enough to be valuable to a supplier.²⁹³

Under SB 407 and related state laws, for example, fixture efficiency standards will typically be enforced at three points in time for homeowners.²⁹⁴ First, as fixtures wear out, homeowners will have to replace the fixtures with higher-efficiency models.²⁹⁵ Second, homeowners that seek to remodel or expand their homes will have to demonstrate compliance in order to obtain a building permit.²⁹⁶ Third, homeowners must disclose whether their fixtures comply with efficiency laws when the home is sold; however, this disclosure requirement does not mandate that the retrofit take place at sale.²⁹⁷ As explained below, as a result

287. The Environmental Protection Agency sometimes sets efficiency standards. *See generally* U.S. ENVTL PROT. AGENCY, *WaterSense® New Home Specification* (effective July 4, 2014), available at http://www.epa.gov/watersense/docs/home_finalspec508.pdf (on file with the *McGeorge Law Review*).

288. *See* CIV. § 1101.8(b) (West, Supp. 2014) (exempting from SB 407 local governments that adopted a retrofit on remodel or resale ordinance with the same or more stringent standards prior to July 1, 2009); *cf.* METRO. WATER DIST. OF S. CAL., MODEL WATER CONSERVATION ORDINANCE (2009) (suggesting that cities and counties mandate installation of water conserving plumbing fixtures prior to any sale or transfer of real property) (on file with the *McGeorge Law Review*).

289. CAL. WATER CODE § 10608(g) (West Supp. 2014); *see also* *Retrofit Upon Resale Requirements*, CITY OF BURBANK WATER & POWER (2010), available at <http://www.burbankwaterandpower.com/water/rules-and-regulations-water/retrofit-upon-resale-requirements> (on file with the *McGeorge Law Review*).

290. *See* CIVIL § 1101.5 (mandating retrofits to pre-1994 structures and thereby preventing the use of retrofits in those buildings to offset new developments).

291. *See* CAL. BLDG. OFFICIALS, THE APPLICATION OF SB 407 (2009) (discussing the possibility of SB 407 being enforced in a "realistic and manageable" manner).

292. *See id.* (discussing the "realistic and manageable" implementation of SB 407, which could leave said gaps in compliance).

293. *See* BLANCO ET AL., *supra* note 51, at 2–3 (noting increasing saturation of regions with water conservation measures, leading to the potential for temporary savings to have increased value).

294. CIV. § 1101.5 (West 2009).

295. *Id.*

296. *See id.* §§ 1101.4(a), 1101.5(d) (West Supp. 2014).

297. *See id.* § 1102.155(a)(2) ("[T]his disclosure is not intended to be part of any contract between the buyer and the seller"); *see also* ASSEMBLY COMMITTEE ON JUDICIARY, COMMITTEE ANALYSIS OF SB 407, at 6

of this enforcement model, there will be a time lag before some homeowners will be required to, or will actually, retrofit their fixtures.²⁹⁸

The compliance time lag occurs because, under SB 407, only specific subsets of existing homes trigger an enforcement mechanism that imposes a consequence for non-compliance.²⁹⁹ For example, only a subset of homeowners will undertake remodels or additions that trigger the need for a qualifying building permit; even if this subset is significant,³⁰⁰ it will not include all pre-1994 homeowners. Although other homeowners could unilaterally comply, this seems unlikely on a broad scale due to cost and time.³⁰¹ Moreover, there are no known plans for code enforcement or other home inspections that would result in mandatory compliance.³⁰² Finally, the disclosure required at sale does not result in a mandatory duty to retrofit at the time of sale.³⁰³ As a result, until fixtures naturally require replacement, there will be some homeowners that would not retrofit absent a water neutral program. Water neutral programs can capture some of these savings.³⁰⁴

The potential for savings during a compliance gap, however, does not necessarily mean that the savings will be meaningful in a water neutral program. Each jurisdiction will have a different level of potential savings based on factors such as the current level of retrofit saturation and the size of the community, other supplier retrofit incentives, and community conservation ethos.³⁰⁵ Water

(June 30, 2009) (describing how SB 407 was amended prior to passage to “move away from a retrofit-on-resale approach” and does not “inextricably” link the blanket requirement for replacement of non-compliant fixtures to the sale or transfer of property): Kathleen Wilson, *Low-Flow Toilets Required in California for All Home Renovations*, VENTURA COUNTY STAR, Aug. 22, 2013, <http://www.vcstar.com/lifestyle/under-new-law-if-you-remodel-anything-you-will> (on file with *McGeorge Law Review*) (“Building inspectors say they won’t become ‘toilet police.’” and although some compliance is expected, “[t]here’s no language that compels local building departments to write letters and knock on people’s doors . . . I don’t think the law anticipates there will be 100% compliance.”).

298. *See id.* (explaining the enforcement pattern, which leaves a time lag before retrofitting will actually occur).

299. *Id.* § 1101.5(d) (describing the circumstances which trigger immediate enforcement mechanisms).

300. *Remodeling Market Index Steady at Historical High*, NATIONAL ASSOCIATION OF HOME BUILDERS, http://www.nahb.org/news_details.aspx?sectionID=136&newsID=16615 (last visited Jan. 23, 2006) (on file with the *McGeorge Law Review*).

301. *See* Legislative Analysis by California Building Officials, *Installation of Water Use Efficiency Improvements: SB 407*, at 2 (2009), available at <http://www.co.fresno.ca.us/ViewDocument.aspx?id=57036> (on file with the *McGeorge Law Review*) (suggesting that SB 407 should be applied in a “realistic and manageable” manner to avoid “dramatic impact on building departments and homeowners performing alterations and improvements . . . It is feared that the application of this law will lead to excessive costs for property owners and increased permit avoidance.”).

302. *See* Elizabeth Kalfsbeek, *Homeowners Planning To Remodel Face New Water-Conservation Rules*, WOODLAND DAILY DEMOCRAT, Dec. 29, 2013, http://www.dailydemocrat.com/ci_24808002/homeowners-planning-remodel-face-new-water-conservation-rules (on file with the *McGeorge Law Review*) (noting that resale inspection does not trigger compliance unless a permit is required as a result of a resale inspection).

303. CAL. CIVIL CODE § 1101.4 (West 2009).

304. *See* SCWD Agenda Item 5.2 Memo, *supra* note 47, at 7 (describing how “Water Demand Offset Program” can delay impacts of additional water use).

305. *See* MASS. WATER CONSERVATION STANDARDS, *supra* note 227, at 44 (“There is no ‘one size fits

neutral programs that are fixture retrofit programs, and potential new water neutral retrofit programs, should evaluate the level of existing and likely future compliance with mandatory retrofit and efficiency laws in their communities in order to assess the potential for water neutral savings.³⁰⁶ In some instances, savings may be too temporary or otherwise minimal to be feasible or cost-effective. In other instances, temporary savings may be valuable within a supplier's overall supply portfolio.

Beyond fixture retrofits, the same assessment should be undertaken for other potential areas of water savings through water neutral programs. Outdoor water use, for example, makes up a substantial percentage of urban water demand.³⁰⁷ State resource agencies and organizations such as the California Urban Water Conservation Council are partnering to transform attitudes about lawns and other aspects of sustainable landscaping, encouraging a "new normal" that may provide increased opportunities for water neutral programs to redesign and retrofit existing residential and commercial landscapes and produce meaningful water savings.³⁰⁸ Retrofit or improvement programs that focus on outdoor efficiency measures such as turf replacement and irrigation upgrades have the potential to save meaningful water quantities, but need to be evaluated against mandatory legal requirements to determine if those savings can be credited to water neutral programs.³⁰⁹ Likewise, water meters are mandatory in California,

all' approach . . .").

306. *Id.* (noting that differing approaches will be necessary in different areas).

307. See AQUACRAFT, *supra* note 1, at 232–38; CAL. DEP'T OF WATER RES., A REPORT TO THE LEGISLATURE PURSUANT TO AB 1881 SECTION 65595(A)(2), at 5 (Jan. 14, 2009), available at http://www.water.ca.gov/legislation/docs/watercons_land_1990.pdf (on file with the *McGeorge Law Review*) [hereinafter DWR REPORT ON AB 1881] (landscape irrigation makes up one-third to half of all urban water use) (citing California Department of Water Resources, California Water Plan Update 2005); see generally PETER H. GLEICK ET AL., PAC. INST., WASTE NOT, WANT NOT: THE POTENTIAL FOR URBAN WATER CONSERVATION IN CALIFORNIA (Nicholas L. Cain ed., Nov. 2003), available at http://www.pacinst.org/wp-content/uploads/sites/21/2013/02/waste_not_want_not_full_report3.pdf (on file with the *McGeorge Law Review*) (California could reduce outdoor residential use by 25 to 40 percent through improved landscape design and management, and technology improvements).

308. See generally CAL. URBAN WATER CONSERVATION COUNCIL, ACHIEVING A NEW NORMAL IN CALIFORNIA LANDSCAPES, 2014 LANDSCAPE SYMPOSIA REPORT (2014), available at <http://cuwcc.org/Portals/0/Document%20Library/Resources/Workshops/Landscape%20Symposia/CUWCC%20Landscape%20Symposia%20Report.pdf> (on file with the *McGeorge Law Review*); CAL. URBAN WATER CONSERVATION COUNCIL, SUSTAINABLE LANDSCAPING: MARKET TRANSFORMATION FRAMEWORK (Feb. 13, 2015), available at http://www.water.ca.gov/calendar/materials/sustainable_landscaping_market_transformation_framework_v8a_18595.pdf (on file with the *McGeorge Law Review*).

309. Such mandatory legal requirements may apply in connection with a local water-efficient landscape ordinance, for example, adopted pursuant to the requirements of the Water Conservation in Landscaping Act of 2006 (AB 1881). AB 1881 directed development of a "Model Water Efficiency Landscape Ordinance," and required cities and counties to either adopt the ordinance or alternative at least as effective by January 2010. See DWR REPORT ON AB 1881, *supra* note 307; see also AQUACRAFT, *supra* note 1, at 247 (landscape model ordinance will encompass approximately 30% of California single family homes and applies to new landscaping or major renovations affecting 5,000 square feet or more of landscape area, or 2,500 square feet (0.06 acres) for other structures with outdoor landscaping); CAL. DEP'T OF WATER RES., INSIDE THE MODEL WATER EFFICIENT LANDSCAPE ORDINANCE 2–3 (on file with the *McGeorge Law Review*). In some instances, CALGreen may also

but there may be opportunity for water neutral programs to accelerate installation or upgrade already-required meters.³¹⁰ In this regard, water neutral programs should explore efficiency approaches for which there are as yet no mandatory retrofit or new home requirements in California, such as rainwater harvest, graywater systems, and stormwater capture.

In summary, to ensure that water savings are real, each water neutral program should evaluate the savings that would occur without the program, given the existing regulatory environment, versus with the program. In some instances, the savings that can be associated with water neutral programs will be small or limited in time, and the supplier should evaluate whether these savings are sufficient. If savings are too small, then the supplier should evaluate the potential to shift the water neutral program into other areas for which there are as yet no mandatory requirements, such as stormwater capture.

C. Ensuring Wet Water: Enforcement

Enforcement is another key challenge for a successful water neutral program.³¹¹ In this context, enforcement refers to all methods of assuring that existing and new developments are faithful to the water neutral program elements such as, for example, using efficient fixtures where installed, maintaining low-water use landscaping, and prohibiting excessive use elsewhere that might otherwise cancel out program savings.³¹² Lack of compliance does not necessarily imply malice or fault;³¹³ enforcement is intended to ensure the integrity of the program. If water demand is underestimated or offsets are too low, then a water

impose mandatory requirements, including automatic weather or soil moisture-based irrigation controller systems. CAL. GREEN BUILDING CODE § 4301.1; *see, e.g.*, CAL. HOUSING & CMTY. DEV., 2013 CALGREEN RESIDENTIAL MANDATORY MEASURES (2013).

310. *See* CAL. WATER CODE § 520 (West 2009); AQUACRAFT, *supra* note 1, at 282 (smart meters can help address leaks, which represents substantial water savings); GLEICK TESTIMONY, *supra* note 37, at 3 (“Dozens of urban agencies still have unmetered connections. [Metering] deadlines should be pushed forward rapidly . . .”); Bryan Barnhart, *Upgrading Conservation Pricing: Proposition 218, Smart Meters, and the Step Beyond Tiered Rates*, CALIFORNIA WATER LAW JOURNAL (Jan. 3, 2014), <http://blogs.mcgeorge.edu/waterlawjournal> (on file with *McGeorge Law Review*) (describing smart meters).

311. Kanouse Interview, *supra* note 181; Duncan SCWD Presentation, *supra* note 59.

312. *E.g.* SOQUEL CREEK WATER DISTRICT ORDINANCE NO. 13-02 §VIII.B.1.a (2013) (fines and potential imprisonment); OXNARD CITY CODE §22-137 (escalating from warnings to increasing surcharges to flow-restricting device to service discontinuance and other penalties; *id.* at §22-136 (listing specific prohibitions plus “any indiscriminate and unreasonable waste”); *cf.* CAMARILLO CITY CODE §14.12.050(5) (2009) (at fourth violation city may install flow restrictor for minimum of forty-eight hours at customer expense; only willful violations result in service disconnection); *see generally* WATER § 377 (violation of water conservation plan is a misdemeanor).

313. There are various reasons why a development might exceed estimated water use, some systemic and some behavioral, such as: inherent uncertainties in demand prediction, changes to indoor and outdoor water use behavior, substitution of planned elements such as low-water landscaping with more water-intensive choices, replacement of low-flow fixtures to satisfy personal preference and convenience, and lack of efficiency in or failure of water-conserving fixtures or systems (such as graywater or cisterns) due to technical faults or wear-and-tear.

neutral program will not provide the benefits anticipated at adoption.

General water conservation ordinances routinely identify penalties for excessive use and waste; these may include monetary penalties, temporary or permanent discontinuance of service, criminal fines, and jail time.³¹⁴ In order to ensure such penalties are meaningful, the supplier first must identify excessive or wasteful water use.³¹⁵ One method for identifying excessive use at the household level is through meters.³¹⁶ In some instances, excessive water use may be corrected through higher cost unit pricing, i.e., tiered pricing, rather than through penalties or threat of service termination.³¹⁷

Suppliers also identify and correct individual wasteful behavior through physical enforcement patrols that canvass neighborhoods, respond to complaints, and issue citations.³¹⁸ Some suppliers have adopted neighborhood reporting programs, wherein neighbors can report violators by calling a hotline.³¹⁹ Behavioral approaches and new technologies may encourage conservation at the individual level, including the use of social media and new digital applications

314. See sources cite *supra* note 312.

315. 2010 OXNARD PLAN, *supra* note 115, at 29.

The ordinance requirements need to be communicated to the parties effected by the ordinance. For example, Water Resources Division staff have been actively enforcing the Water Conservation Ordinance through water waste patrols. During the weekdays, field-based workers keep an eye out for water waste and report it back to conservation staff for follow up. During the weekends, water waste patrols inspect the streets for water waste and educate water customers when waste is observed. To date, more than a thousand written Water Waste Alerts have been delivered. There must be enforcement of the ordinance to ensure that requirements are being properly implemented. For example, a lawn watering ordinance may state that there are time and day limits on watering with penalties in place for abuse of the ordinance. If there is no enforcement at 2am, for instance, customers will figure this out and simply reset their timers for these time slots.

316. See WATER § 521(a).

317. The ability of water suppliers to adopt tiered rates has been challenged as inconsistent with California's constitutional standards requiring that rates be based on cost of service. *City of Palmdale v. Palmdale Water Dist.*, 198 Cal. App. 4th 926 (2011) (holding that water district's conservation rate structure was inconsistent with constitutional cost of service standards under Proposition 218); *but cf.* WATER § 370(b) ("It is in the best interest of the people of California to encourage public entities to voluntarily use allocation-based conservation water pricing, tailored to local needs and conditions, as a means of increasing efficient uses of water, and further discouraging wasteful or unreasonable use of water under both normal and dry-year hydrologic conditions."). As of March 2015, a similar challenge is pending before California's Fourth District Court of Appeal. *Capistrano Taxpayers Ass'n v. City of San Juan Capistrano*, No. 30-2012-00594579.

318. CITY OF SACRAMENTO, CITY COUNCIL REPORT 2014-00140 (Mar. 4, 2014) ("To improve enforcement, the Departments of Utilities and Community Development have collaborated to use building inspection and code enforcement staff to assist with outdoor water use patrols. This strategy bolsters the number of City staff involved in patrols from approximately seven to forty, providing a significant augmentation to outdoor irrigation enforcement efforts."); see Paul Rogers, *California Drought: 'Water cop' Being Hired by Bay Area Agencies to Root Out Water Waste*, SAN JOSE MERCURY NEWS, July 21, 2014, http://www.mercurynews.com/science/ci_26191180/california-drought-water-cops-being-hired-by-bay (on file with the *McGeorge Law Review*).

319. See MARION BOULICAULT & ADAM SCHEMPF, ENVTL LAW INST., FIVE THINGS TO CONSIDER WHEN DEVELOPING AND ADAPTING WATER POLICIES AND PROGRAMS IN THE WEST 6 (Jan. 2014), available at http://www.eli.org/sites/default/files/five_things_to_consider_-_web_eli.pdf (on file with the *McGeorge Law Review*) (discussing water "enforcers").

(“apps”) to shame water wasters and otherwise help reduce water use.³²⁰ Physical patrols and reporting programs serve to increase awareness, and also act as a brake on individual water users who may openly and repeatedly flaunt the law.³²¹ Such hands-on enforcement, however, cannot be effective on a broad scale as a result of staff limits and the sheer impossibility of patrolling every yard and each home. Also, patrols and reporting raise issues of cost and community image: outside of a significant drought or shortage, water suppliers may wish to avoid the role of “water cop” on a long-term, intensive basis.

Where hands-on enforcement does occur, it is unlikely to reach inside homes and businesses. California counties and cities have the authority to conduct inspections and issue warrants to enforce code provisions,³²² but such authority is typically not shared by water suppliers that are not cities and counties, such as the special districts that supply most of California’s water.³²³ In this regard, California’s Department of Water Resources has recommended providing special districts and other non-land use suppliers with additional enforcement tools, including delegated citation authority.³²⁴ Even with such changes, however, none of the water suppliers are likely to wield that authority on a sufficiently broad scale to make a difference in efficiency.³²⁵

With respect to enforcement of water neutral programs, offset ratios that are greater than 1:1 may provide some cushion against higher-than-projected water use.³²⁶ But active enforcement would still be needed to ensure that use is

320. Keith Wagstaff, *Drought-Shaming Apps Target California Water Wasters*, NBCNEWS.COM (July 29, 2014), <http://www.nbcnews.com/storyline/california-drought/drought-shaming-apps-target-california-water-wasters-n167651> (on file with *McGeorge Law Review*).

321. *Id.*

322. CAL. CODE CIV. PROC. § 1822.50 (West 2007) (“[a]n inspection warrant is an order, in writing, in the name of the people, signed by a judge of a court of record, directed to a state or local official, commanding him to conduct any inspection required or authorized by state or local law or regulation relating to building, fire, safety, plumbing, electrical, health, labor, or zoning.”); see *Currier v. City of Pasadena* 48 Cal. App. 3d 810 (1975).

323. *Cf. Thum v. Bd. of Dirs. Monterey Peninsula Water Mgmt. Dist.*, No. H039566, 2014 Cal. App. Unpub. LEXIS 9159, *58–61 (Dec. 23, 2014) (exploring but ultimately not deciding whether water supplier had statutory authority to conduct inspection of water fixtures).

324. 20X2020 PLAN, *supra* note 3, at 44:

[R]ecommending that the state “[p]rovide additional enforcement tools for water suppliers: Communities where the local government is not the water supplier face many unique challenges. One is that water suppliers generally monitor water use for waste, but unlike local governments they do not have the authority to issue citations. It would help water suppliers mount effective waste prevention programs if state law provided clear authority for local governments to transfer citation authority to water suppliers to discourage water waste. Better communication and coordination among local governments and water suppliers is essential, with or without new citation authorities.

325. In addition to practical limitations such as resources and costs, inspections can cause ill-will between residents and service providers, and result in additional liabilities for the provider. *Thum*, 2014 Cal. App. Unpub. LEXIS 9159 *1–6; see also Brief for Respondents at 6, *Thum v. Bd. of Dirs. Monterey Peninsula Water Mgmt. Dist.*, No. H039566, 2014 Cal. App. Unpub. LEXIS 9159 (Dec. 23, 2014) (describing controversy).

326. See VWD 2010 PLAN, *supra* note 243, at 8-3.

Prohibitions on new development may conflict with other policies and needs. However, if existing customers are called upon to make sacrifices during a drought period, they may feel that water

consistent with offset estimates. Some approaches that have been explored include formal accounting mechanisms for tracking water budgets, and imposition of financial penalties for use that exceeds budgeted quantities. The East Bay Municipal Utility District in California, and the City of Santa Fe, New Mexico, provide examples of these types of approaches.

The East Bay Municipal Utility District (EBMUD) employs a detailed approach to enforcement in new subdivisions that are subject to water neutral requirements. Each subdivision subject to water neutral standards must develop a water budget with the assistance of a professional engineer; this water budget is required to be included in enforceable deed restrictions for each home within the subdivision.³²⁷ The subdivision is further conditioned on the creation of a homeowner's association responsible for interacting with EBMUD on water use issues.³²⁸ Water use for a subdivision is reported through each homeowner's association; if the budget is exceeded, EBMUD levies a fine against the association, which is paid through homeowner dues or is passed on to an individual homeowner, as circumstances warrant.³²⁹

Santa Fe also has a detailed enforcement program. Santa Fe assigns budgets or allotments of water use, and then monitors water use on an annual basis.³³⁰ If there is a water use exceedance, then monitoring shifts to monthly, tracking water use over the same month during the prior year to evaluate the degree of non-compliance. Customers with monthly increased use are charged a 50% surcharge for water used beyond their allotment.³³¹

If the customer is still exceeding the water budget after four months by 10% or more, Santa Fe recalculates the budget based on actual consumption over the exceedance period.³³² The customer then must provide any additional credits or transfers required by the new, larger water budget.³³³ A customer that fails to

agencies should concentrate on fulfilling current obligations rather than taking on new customers. Such prohibitions may need to be considered in the event of a critical shortage, such as a 50 percent reduction program. If necessary, an offset program could be considered . . . [i]n some cases, a two to one offset may be required of the new development.

327. Kanouse & Wallace, *supra* note 14, at 160–62.

328. *Id.*

329. See generally Caitlin S. Dyckman, *supra* note 40, at 49 (describing the role of homeowner's associations and CC&Rs in California water conservation and suggesting that developers can achieve "real water savings" by integrating conservation in built form such as landscape design, recycled water infrastructure, and conservation in CC&Rs).

330. SANTA FE, N.M., CODE, ch. 14, § 8.13; SANTA FE, N.M., ADMINISTRATIVE PROCEDURES FOR WATER DEMAND OFFSET REQUIREMENTS, § 1.7 (Exhibit A, Resolution 2010-20) (Mar. 31, 2010), available at http://www.santafenm.gov/m/development_water_budgets (on file with the *McGeorge Law Review*).

331. SANTA FE, N.M., ADMINISTRATIVE PROCEDURES FOR WATER DEMAND OFFSET REQUIREMENTS, § 1.7.1 (Exhibit A, Resolution 2010-20) (Mar. 31, 2010), available at http://www.santafenm.gov/m/development_water_budgets (on file with the *McGeorge Law Review*).

332. *Id.*

333. *Id.*

provide additional offsets will be charged for the cost of city-provided offsets plus a 50% surcharge on out-of-budget water delivered during the second year.³³⁴

Although costly to establish and implement, enforcement programs like those in EBMUD and Santa Fe facilitate a quantitative understanding of water use that is becoming more important as California grapples with limited supplies and a growing population. The quantification and tracking that occurs with water budgets provide accountability³³⁵ that can shed light on whether costs invested in water conservation programs—including, but not limited to water neutral programs—have been efficiently invested.

These active enforcement approaches may be substituted or supplemented with passive or “autopilot” measures that hardwire conservation through technology, as well as legal or behavioral measures that assign responsibility for water use to the customers themselves. According to some sources, water users conserve the most when water use is monitored, when increased water use results in higher water bills, and when they have the ability to monitor their own water use.³³⁶ A combination of water meters and pricing signals is considered one of the most effective and cost efficient routes to increased conservation.³³⁷ More recently, suppliers have begun experimenting with “smart meters,” which offer water users the ability to monitor and adjust their water use in real time.³³⁸ Increasingly in the future, smart meters may be integrated into personal dashboards, in which users monitor water (and energy) consumption in real time from their personal electronic devices.³³⁹

Another approach to conservation was highlighted by a 2013 pilot program jointly undertaken by the California Water Foundation and EBMUD.³⁴⁰ The program involved preparation of individual household water use reports using a technology that tracks and compares water use, here called WaterSmart Software.³⁴¹ The software compares individual household use to average use by

334. *Id.* § 1.7.4

335. See GLEICK TESTIMONY, *supra* note 37, at 6 (describing the need for better water use measurement and verification); AQUACRAFT, *supra* note 1, at 279 (recommending tracking customer performance based on water use).

336. GLEICK TESTIMONY, *supra* note 37, at 6; AQUACRAFT, *supra* note 1, at 279.

337. See KRISTINA DONNELLY & HEATHER COOLEY, PAC. INST., METERS IN CALIFORNIA 2 (Sept. 18, 2014), available at <http://pacinst.org/wp-content/uploads/sites/21/2014/09/pacinst-metering-in-california.pdf> (on file with the *McGeorge Law Review*); AQUACRAFT, *supra* note 1, at 279 (noting that smart meters enabling customers to monitor their usage led to significant conservation).

338. See AQUACRAFT, *supra* note 1, at 282 (noting that smart meters can help address leaks leading to substantial water savings); see also Barnhart, *supra* note 310.

339. AQUACRAFT, *supra* note 1, at 279; cf. John Schmid, *Badger Meter App Monitors Water Use*, MILWAUKEE WIS. J. SENTINEL, Aug. 7, 2014, <http://www.jsonline.com/business/badger-meter-app-monitors-water-use-b99320297z1-270260781.html> (on file with the *McGeorge Law Review*).

340. DAVID MITCHELL & THOMAS W. CHESNUTT, EVALUATION OF EAST BAY MUNICIPAL UTILITY DISTRICT'S PILOT OF WATERSMART HOME WATER REPORT, at iii–vi (2013), available at [http://californiawaterfoundation.org/uploads/1389391749-Watersmart_evaluation_report_FINAL_12-12-13\(00238356\).pdf](http://californiawaterfoundation.org/uploads/1389391749-Watersmart_evaluation_report_FINAL_12-12-13(00238356).pdf) (on file with the *McGeorge Law Review*) (prepared for EBMUD and the California Water Foundation).

341. *Id.* at iii.

similar homes and provides personalized recommendations about how to save water.³⁴² A control group accounted for other factors, such as weather, market influences, and other consumer behaviors.³⁴³ This “social norms” approach to efficiency embodied by EBMUD’s pilot study is currently used in the energy industry; although it is new to water suppliers, it is rapidly evolving.³⁴⁴ EBMUD’s pilot study concluded that the reports resulted in a residential water use reduction between 4.6% and 6.6%.³⁴⁵ The study also concluded that participants were more likely to participate in other conservation programs and to request a home water audit to assess conservation opportunities.³⁴⁶ Based on the success of study, EBMUD announced its intention to expand the program in 2014, and other water suppliers are experimenting with the program.³⁴⁷

D. The “Problem” of Demand Hardening

Water neutral programs are sometimes criticized for “hardening demand” by “using up some of the slack in the community’s existing water use practices.”³⁴⁸ This criticism assumes that water use in existing communities is typically inefficient, and further that this inefficiency is valuable because high water use allows conservation measures to be implemented during drought to free up water.³⁴⁹ When baseline use becomes highly efficient, however—through installation of water-saving fixtures, irrigation controllers, and other measures—there may be little flexibility for further conservation during a drought period.³⁵⁰ In other words, as a community becomes more efficient, it loses the ability to implement new efficiencies during drought periods.³⁵¹

The demand-hardening effect is not unique to water neutral programs; it is a common effect of water conservation programs generally. As such, demand hardening is an important phenomenon to track but not necessarily to avoid. California is committed by law and policy to water conservation and efficiency; these choices are reflected by adoption of the statewide goal of reducing per

342. *Id.* at 9.

343. *Id.* at iii.

344. *Id.* at i.

345. *Id.* at iv.

346. *Id.*

347. *Id.*; *New Technology Reduces Home Water Use By 5 Percent*, EAST BAY MUNICIPAL UTILITY DISTRICT, <https://www.ebmud.com/about/news/releases/2014/01/14/new-technology-reduces-home-water-use-5-percent> (last visited July 28, 2014) (on file with the *McGeorge Law Review*); *Marin County Water District Pits Neighbors Against Each Other To See Who Uses Less Water During Drought*, CBS SF BAY AREA (Aug. 4, 2014), <http://sanfrancisco.cbslocal.com/2014/08/04/marin-county-water-district-pits-neighbors-against-each-other-to-see-who-uses-less-water-during-drought/> (on file with the *McGeorge Law Review*) (Marin County water district partnering with WaterSmart for pilot program of bimonthly water reports).

348. 2008 URBAN DROUGHT GUIDEBOOK, *supra* note 39, at 76.

349. *Id.*

350. *Id.*

351. *Id.*

capita use by 20%, as well as by the enactment of laws such as SB 407, AB 1881 and the local counterparts to those laws. Accordingly, local agencies should pursue water-neutral programs despite the tendency to harden demand. Indeed, if implementation of traditional conservation methods hardens demand, local agencies may be inspired to adopt innovative new conservation approaches.

Critique of demand-hardening sometimes may be an implicit critique of the value choice underlying water neutral programs; i.e., the choice to allocate conserved water to new development rather than to other purposes such as drought protection for the existing community, or even instream flow.³⁵² This is, at bottom, a question of whether the community has decided to seek growth. The fundamental question of whether to allocate water to drought protection, instream flow, growth, or some other purposes is one that should be expressly addressed by the community. In some instances, the water supplier and the land use agency will be the same institution; in other instances, they will be separate. In both cases, the water service goals—and any associated program, including water neutral—should be consistent with the growth goals and objectives as defined by the community.

E. Cost (Developers, Homeowners, Communities)

One major challenge for water neutral programs is the cost to developers and, consequently, to homeowners.³⁵³ Whether these costs are truly prohibitive or merely undesirable is unclear. The cost of offsets to new development ranges considerably depending on specific program requirements and the cost per acre-foot for the supplier. Typical single-family home costs appear to range from \$2,000 to \$7,000 at present, although costs may be lower or considerably higher.³⁵⁴ According to building industry advocates, increased costs drive up

352. See June 2014 SCWD Water Demand Offset Memo, *supra* note 202 (detailing concern SCWD's demand offset program is "stealing" from the future water conservation supply pool and thus insufficient water savings will be achievable to prevent seawater intrusion).

353. See 20X2020 PLAN, *supra* note 3, at 44 ("Conservation offsets can also be controversial. Total offsets may raise the price of new housing significantly in a state where affordable housing is already an issue."); 2010 OXNARD PLAN, *supra* note 115, at 29 ("The ordinance must be well designed and reasonable. Many ordinances are overly burdensome, causing ill will on the part of the customer. For instance, New Construction Ordinances must be designed to be builder friendly and not negatively impact salability of the property, as a result of the ordinance.").

354. Costs are variously reported as per home or per acre-foot; a typical home does not use a full acre-foot per year. Also, some costs are reported as the direct in-lieu fee; however, the entire fee may or may not be passed on directly to the homeowner. See Fact Sheet, Soquel Creek Water District, Water Demand Offset Policy Fact Sheet, available at http://greencitiescalifornia.org/assets/water/Soquel_water-demand-offsets_WDO-FactSheet.pdf (on file with the *McGeorge Law Review*) (identifying cost of \$18,000 per acre-foot for retrofit program, with a typical single-family home cost ranging from \$4,320–\$6,264); Maddaus et al., *supra* note 15, at 109 (2:1 offsets imposed by EBMUD cost \$6000 per home); Wilson, *supra* note 54; BIG BEAR LAKE 2010 PLAN, *supra* note 76 (identifying cost per acre-foot at \$2,111 for toilet rebates and \$6,700 for direct installs; over the 20-year lifetime of a toilet, the cost per acre-foot decrease to \$106 per acre-foot for rebates, and \$335 per acre-foot for direct installs); *cf. id.* (noting that while the cost per acre-foot for rebates is

home prices and may affect project feasibility, which in turn would affect growth and employment opportunities.³⁵⁵

Concern about impacts to costs and jobs have been significant enough to forestall legislation that proposed to integrate water neutral principles into water planning on a statewide basis.³⁵⁶ In 2009, building industry and economic development groups opposed legislation that would have imposed a water neutral standard on all new development in California.³⁵⁷ The bill, AB 1408, was the product of the combined efforts of the East Bay Municipal Utility District (EBMUD) and the nonprofit environmental group, the Planning and Conservation League (PCL).³⁵⁸ As described in Part IV.C of this Article, EBMUD had designed its own water neutral program for out-of-service-area subdivisions and thus had experience with the programs on a fairly large scale.³⁵⁹ PCL's policy initiatives were focused on programs that had the potential to result in measurable positive change in California, with water neutral among the top ten selections.³⁶⁰ With the continuing drought of 2008 moving water issues to the front of the legislative agenda, EBMUD and PCL took the opportunity to join forces on seeking a statewide water neutral standard.³⁶¹

The resulting bill, AB 1408, proposed to impose a water neutral standard through an existing approval process under the state Subdivision Map Act called "water supply verification."³⁶² State law requires that tentative maps for subdivisions of more than 500 units contain a condition requiring the subdivision to verify that it has a sufficient water supply.³⁶³ AB 1408 would have added that as part of demonstrating a sufficient supply, subdivisions could participate in a voluntary Water Conservation Mitigation Fund, which would be required to offset "at least 100 percent of the projected demand associated with the

significantly cheaper than for direct installs, customer participation is much higher for direct installs, allowing more toilets to be retrofitted); *see also* Kanouse Interview, *supra* note 181 (citing costs equivalent to \$30,000 per new home); June 2014 SCWD Water Demand Offset Memo, *supra* note 202, at 4 (suggesting option of \$40,000 offset level per acre-foot); *SCWD Water Demand Offset*, *supra* note 190 (\$55,000 offset fee per acre-foot).

355. *E.g.*, 2005 CLOVIS PLAN, *supra* note 243, at 45 ("[N]ew development requirements, restrictions, offset programs and plumbing code changes do not have any significant direct costs. However, restrictions on connections can have significant indirect costs to the City in the form of lost revenues.").

356. *California Chamber of Commerce: Cal. Chamber Status Update Report on Major Legislation for Business*, 35 ALERT 7, 22 (Sept. 18, 2009).

357. *Id.*

358. *See* AB 1408, 2009 Leg., 2009–2010 Reg. Sess. (Cal. 2009) (as amended on Apr. 23, 2009, but not enacted).

359. *See supra* Part IV.C.

360. AB 2153 (KREKORIAN) CALIFORNIA WATER EFFICIENCY & SECURITY ACT OF 2008 FACT SHEET, PLANNING AND CONSERVATION LEAGUE (Apr. 7, 2008) (on file with the *McGeorge Law Review*) [hereinafter AB 2153 FACT SHEET].

361. *See* AB 1408, 2009 Leg., 2009–2010 Reg. Sess. (Cal. 2009) (as amended on Apr. 23, 2009, but not enacted).

362. *Id.*

363. *Id.*

subdivision.”³⁶⁴ The bill required conservation measures to be “quantifiable, verifiable, have a planned completion date that is concurrent with when the buildings within the subdivision will require service, and have a life expectancy of at least 20 years.”³⁶⁵ To provide an incentive for new development to propose conservation measures during the offset process, the bill incorporated EBMUD’s distinction between baseline and extraordinary conservation measures.³⁶⁶ The bill also would have retained EBMUD’s enforcement approach, requiring that conservation requirements be integrated into the deed restrictions for new developments, with financial penalties where projected water conservation did not occur.³⁶⁷

AB 1408 was one of four bills proposed from 2007 through 2010 that would have integrated water neutral principles into state law.³⁶⁸ Neither AB 1408 nor any of the other bills moved forward due in large part to opposition from the California Chamber of Commerce, the building industry, and others.³⁶⁹ These organizations opposed the bills on the basis that significant costs would affect the feasibility of new development, with the secondary potential to reduce construction jobs.³⁷⁰ As it happened, the foregoing water neutral proposals coincided with a period of financial crisis for the state, making it difficult to enact measures that imposed more obligations on already-struggling new

364. *Id.*

365. *Id.*

366. *See id.* (referencing “permanently fixed extraordinary water conservation measures”).

367. *Id.*

368. Kanouse & Wallace, *supra* note 14, at n. 115 (listing AB 2153, 2007–2008 Reg. Session. (Cal. 2008); AB 2219, 2007–2008 Reg. Sess. (Cal. 2008); AB 300, 2009–2010 Reg. Sess. (Cal. 2009); AB 1408, 2009–2010 Reg. Sess. (Cal. 2009)). AB 2153 would have amended the California Environmental Quality Act (“CEQA”) “to require every new residential or commercial building subject to CEQA to implement all feasible and cost-effective water efficiency measures, then mitigate its annual water consumption as projected by the water supplier.” ASSEMBLY FLOOR, COMMITTEE ANALYSIS OF AB 2153, at 1 (May 24, 2008); AB 2153 FACT SHEET, *supra* note 360. AB 2153 would also have dedicated a portion of the mitigation fund to improvements and retrofits within disadvantaged communities. *See* Mindy McIntire, *Dampening Growth*, L.A. TIMES, Apr. 9, 2008, <http://www.latimes.com/opinion/la-op-snow-mcintyre9apr09-story.html#page=1> (on file with the *McGeorge Law Review*).

369. *See California Chamber of Commerce: Cal. Chamber Status Update Report on Major Legislation for Business*, 35 ALERT 7, 22 (Sept. 18, 2009) (noting opposition to AB 1408); Interview with Evon Wilhoff, California Department of Water Resources, in Sacramento, CA (notes on file with the *McGeorge Law Review*); *Vote Record: Job Creators, Job Killers*, ALERT, at 3 (July 25, 2008) (identifying AB 2153 as a ‘job killer’ and stating that it “[i]mposes an unconstitutional developer fee on new residential and commercial development that will be used to finance water conservation strategies in existing communities by requiring that all new development be water-demand neutral.”); *see ACWA Releases 2008 Legislative Vote Record*, ACWA NEWS (Ass’n of Cal. Water Agencies, Sacramento, Cal.), Dec. 15, 2008, at 6 (on file with the *McGeorge Law Review*) (opposing AB 2153 because it was “impractical to implement”); *see also* Allen Lind, *Capitol Snapshot*, May 7, 2008 (on file with the *McGeorge Law Review*) (stating that policy should be part of Water Code, rather than CEQA, and AEP would support if amended accordingly).

370. SENATE COMMITTEE ON NATURAL RESOURCES AND APPROPRIATIONS, ANALYSIS OF AB 2153, at 2 (May 19, 2008).

development.³⁷¹ That timing virtually guaranteed that the proposals would be considered too costly.³⁷²

In addition to concerns about the cost to development and housing, another financial concern associated with water neutral programs is the perception that existing customers will be burdened by higher costs in the long term. According to this theory, new development will have already implemented lower cost offsets, thus forcing existing customers to bear the burden of more expensive conservation methods.³⁷³ To address this issue, one water supplier proposed to modify its offset program to require new development to undertake more expensive conservation measures that have significant water savings, and ultimately adopted a substantial fee of \$55,000 per acre-foot in lieu of undertaking retrofits.³⁷⁴

Concerns about the cost of water neutral programs are countered by at least two related factors. First, in jurisdictions experiencing an emergency shortage, the cost of water neutral may be preferable to a moratorium on new connections. Second, as supplies decrease and the marginal cost of water increases, the relative cost of water neutral will decrease. These factors explain why, in California, water neutral development standards are most prevalent in areas of critical water shortage.

F. Emergency Drought Measure or Sustainability Tool

Water neutral programs have been identified both as a potential long-term conservation tool to meet statewide water efficiency objectives,³⁷⁵ and also as a potential “stop-gap” measure adopted during the late stages of an emergency drought program.³⁷⁶ This dual, conflicting perception of water neutral is reflected in attitudes throughout California, where water neutral is praised as innovative

371. Another factor affecting these bills may have been the perception that they encroached too substantially on the ability of water suppliers to evaluate the desirability and feasibility of water neutral programs in light of the particular circumstances of their service areas. *Id.* (“[T]his bill would require each new building to mitigate any protected water use, on the basis that net water consumption should be avoided for new construction as a statewide matter, regardless of individual project details or local circumstances.”).

372. *Id.*

373. See SCWD Survey Memo, *supra* note 32.

374. *Id.*; SCWD Water Demand Offset, *supra* note 190; see also SCWD June 17, 2014 Meeting Minutes, *supra* note 206, at 9 (containing draft meeting minutes for June 17, 2014 that noted passage of motion to adopt new offset fee).

375. See 20X2020 PLAN, *supra* note 3, at 44 (recommending investigation of total or partial offsets for new development if 2015 efficiency targets are not met, noting that “[c]onservation offsets can be a useful mechanism for promoting new development with a low-water use foot print.”).

376. See 2008 URBAN DROUGHT GUIDEBOOK, *supra* note 39, at 76 (characterizing water neutral programs as a stop-gap measure to be used during periods of shortage, after rationing is imposed, “[i]f a supplier does not stop issuing new meters during rationing”). The program lists water neutral as element of a Stage 3 Drought Emergency. *Id.* For more details on the concept of water neutral as a late-stage emergency measure see *infra* note 243.

conservation tool, yet adoption is limited to areas experiencing critically short water supplies.³⁷⁷

As noted in Part IV.E., water neutral programs in California appear to be concentrated in chronically water-short communities, or those experiencing a shortage.³⁷⁸ One reason for this phenomenon may be that costs of water neutral may seem too high in years of plenty, but the relative cost of a water neutral program is more reasonable during shortages, i.e., where a shortage might otherwise preclude development, a water neutral program becomes more valuable.³⁷⁹ Another factor may simply be that suppliers are not motivated to turn their attention to new programs like water neutral until they are facing a shortage.³⁸⁰

Water neutral programs have demonstrated value during shortages.³⁸¹ At the same time, multiple factors suggest that water neutral should be considered as a tool to facilitate proactive planning for drought, drought resiliency and sustainability beyond shortages.³⁸² First, climate change has the potential to disrupt prior drought planning and result in a mismatch in supply and demand.³⁸³ Second, water planners are adjusting their assumptions about water availability in light of evidence that existing allocations may be based on periods of high precipitation and that drought cycles may be more frequent and extensive than anticipated.³⁸⁴ Third, there is increasing tension between urban and environmental water demand, and innovative programs like water neutral may help ease that tension.³⁸⁵ These and other factors suggest that water neutral programs should be considered as part of proactive planning for drought resiliency³⁸⁶ and sustainability, rather than limited to the emergency sphere.³⁸⁷

377. *Id.*; see also programs described at Part III.A.

378. *Supra*, Part IV.E.

379. *But cf.* Aquacraft, *supra* note 1, at 281 (“As the marginal cost of water increases, so will the value of conserved water and the cost-effectiveness of water conservation efforts.”)

380. *Id.*

381. See, e.g., *supra* notes 200–201 and accompanying text (describing savings associated with Soquel Creek Water District’s demand offset program.)

382. See WATER OFFSET POLICIES, *supra* note 54, at 3 (noting that Denver Water allocates efficiency savings to storage to achieve drought resiliency).

383. See, e.g., Dan Tarlock, *How Well Can Water Law Adapt To the Potential Stresses of Global Climate Change*, 14 U. DENV. WATER L. REV. 1, 34–36 (2010) (describing how climate change will impact water availability, use and management, and proposing that urban growth should be linked to available supplies as a method of adapting to climate change).

384. *Id.*

385. *Id.*

386. *Id.*

387. See ESTHER CONRAD, PREPARING FOR NEW RISKS: ADDRESSING CLIMATE CHANGE IN CALIFORNIA’S URBAN WATER MANAGEMENT PLANS 28 (2013) (“There are limits to the demand reductions a supplier can achieve once drought has already set in. In the context of climate change, disaster management literature has increasingly emphasized the need for long-term planning to reduce risks posed by disasters, rather than simply disaster response.”); 2013 DWR WATER PLAN UPDATE, *supra* note 4, at 3-1 (proposing to include environmental and social requirements as a factor in calculating drought resilience); FRASER SHILLING ET AL.,

In addition to assisting with drought resiliency and sustainability, water neutral programs adopted outside of the shortage context could help promote a culture of conservation. Under this paradigm, communities assume that new development will offset water supply impact as a matter of course. The cultural trend of conservation-as-norm seems to be taking hold in California, in part due to frequent droughts, assisted by the 2009 adoption of a statewide goal of reducing water use by 20% by the year 2020.³⁸⁸ Water neutral programs would help foster a culture that prioritizes conservation and efficiency in water use.

V. LEGAL ISSUES, CHALLENGES, AND OPPORTUNITIES FOR CALIFORNIA WATER NEUTRAL PROGRAMS

Legal challenges to water neutral programs are likely to focus on four general topics: authority, environmental compliance, costs, and the adequacy of the record. This section describes those topics and some key parameters.

A. Authority to Establish a Water Neutral Program

Cities, counties, special districts, and other water suppliers have varying degrees of authority to engage in water conservation, manage and protect water supplies, and mitigate impacts. The authority held by land use agencies, such as cities and counties, is sometimes different from the statutory authority exercised by water districts. The following discussion explores major sources of authority that may support adoption of water neutral programs; other authorities may exist depending on the water supplier and circumstances.

Article X section 2 of the California Constitution requires all uses of water in the state to be reasonable and not wasteful.³⁸⁹ Article X section 2 has been traditionally interpreted by the courts to enforce some reasonable degree of efficiency, but generally not to require maximum efficiency.³⁹⁰ Although the level of efficiency authorized by Article X section 2 has traditionally been something less than maximum possible efficiency, the standard may be evolving as the state's understanding of water management improves and as the needs of the

ENVIRONMENT AND WATER INSTITUTE, MANAGING WATER RESOURCES FOR SUSTAINABILITY IN CALIFORNIA 1, available at <http://message.asce.org/ManagingWRforSustainabilityinCA?elq=7e60e7f2316246029cef693a873e8c60&elqCampaignId=637> (on file with the *McGeorge Law Review*).

388. See CAL. URBAN WATER CONSERVATION COUNCIL, ACHIEVING A NEW NORMAL IN CALIFORNIA LANDSCAPES, 2014 LANDSCAPE SYMPOSIA REPORT (2014), available at <http://cuwcc.org/Portals/0/Document%20Library/Resources/Workshops/Landscape%20Symposia/CUWCC%20Landscape%20Symposia%20Report.pdf> (on file with the *McGeorge Law Review*); CAL. URBAN WATER CONSERVATION COUNCIL, SUSTAINABLE LANDSCAPING: MARKET TRANSFORMATION FRAMEWORK (Feb. 13, 2015), available at http://www.water.ca.gov/calendar/materials/sustainable_landscaping_market_transformation_framework_v8a_18595.pdf (on file with the *McGeorge Law Review*); 20X2020 WATER PLAN, *supra* note 3.

389. CAL. CONST. art X § 2.

390. *E.g.*, *Tulare Dist. v. Lindsay-Strathmore Dist.*, 3 Cal. 2d 489, 547 (1935).

state change over time.³⁹¹ Regardless of the details of the outer limits of that authority, Article X section 2 provides a basis for suppliers to adopt water conservation programs and to require water-saving behavior from their customers.³⁹² Water suppliers routinely invoke Article X section 2 as one of several sources of authority for water conservation and water use efficiency measures.³⁹³

Cities and counties have broad authority to condition development via the police power, i.e., the power to regulate for the general health, safety, and welfare.³⁹⁴ The police power includes the authority to control land use and to levy fees to mitigate the impacts of development.³⁹⁵ This general police power is not shared by other water suppliers that are not cities and counties, such as special districts.³⁹⁶ Cities and counties routinely invoke the police power as one of several sources of authority for water conservation and water use efficiency measures, and at least one superior court decision has upheld that authority.³⁹⁷

Although special districts do not wield a general police power, they are statutorily invested with the power to regulate to further their water supply missions.³⁹⁸ Special districts are creatures of statute, and all districts that supply water are charged with responsibility for safeguarding and managing water supplies for their service areas.³⁹⁹ These responsibilities inherently require suppliers to plan for drought and for physical or regulatory constraints on supply.

391. See, e.g., CRAIG M. WILSON, *THE REASONABLE USE DOCTRINE & AGRICULTURAL WATER USE EFFICIENCY: A REPORT TO THE STATE WATER RESOURCES CONTROL BOARD AND THE DELTA STEWARDSHIP COUNCIL 14* (2011) [hereinafter CRAIG M. WILSON].

392. *Paso Robles Water Integrity Network v. County of San Luis Obispo et al*, No. CV13-8301, slip op. at 7–15 (San Luis Obispo Cnty. Ct. Jan. 12, 2015) (rejecting claim that Article X section 2 limited the County of San Luis Obispo’s ability to adopt a water demand offset ordinance and holding that “increased use of groundwater to irrigate additional acreage . . . would constitute, in the context of our current drought conditions, an unreasonable use of water.”); see, e.g., CAL. WATER CODE § 13550 (a) (West 2009) (declaring that “the use of potable domestic water for nonpotable uses, including . . . irrigation of certain landscaped areas, and industrial and irrigation uses, is a waste or an unreasonable use of the water within the meaning of Section 2 of Article X of the California Constitution if recycled water is [feasibly] available”).

393. See CRAIG M. WILSON, *supra* note 391, at 6–8.

394. CAL. CONST. art. XI § 7 (declaring that a city or county may make and enforce within its limits all local, police, sanitary and other ordinances and regulations not in conflict with general laws).

395. See, e.g., *Ayres v. City Council of Los Angeles*, 207 P.2d 1 (Cal. 1949); *Euclid v. Amber Realty Co.*, 272 U.S. 365 (1926).

396. SENATE LOCAL GOV’T COMM., *WHAT’S SO SPECIAL ABOUT SPECIAL DISTRICTS? A CITIZEN’S GUIDE TO SPECIAL DISTRICTS IN CALIFORNIA 3* (2010).

397. *Paso Robles Water Integrity Network*, No. CV13-8301, slip op. at 15 (holding that the County of San Luis Obispo’s demand offset ordinance was within its police powers); see, e.g., *Gin S. Chow v. City of Santa Barbara*, 217 Cal. 673, 701 (1933) (allowing the city to use its police power to adopt water conservation measures).

398. See *Getz v. Pebble Beach Cmty Serv. Dist.*, 219 Cal. App. 3d 229, 233 (1990) (holding that a community services district had the authority to withhold sewer service was “analogous to that exercised by a municipal water district that had to ‘fairly allocate this vital finite resource for the benefit of the entire populace with the District.’”)

399. SENATE LOCAL GOV’T COMM., *WHAT’S SO SPECIAL ABOUT SPECIAL DISTRICTS? A CITIZEN’S GUIDE TO SPECIAL DISTRICTS IN CALIFORNIA 6* (2010).

These responsibilities are accompanied by authority sufficient to engage in such planning and management, and to take action to avoid and mitigate the effect of new demand on existing customers.⁴⁰⁰ The common law “duty to serve” arguably provides the same mandate and accompanying authority.⁴⁰¹

Beyond general statutory authority, California Water Code sections 375(a) provides all water suppliers in the state—whether city, county, special district or corporation—with authority to adopt water conservation programs.⁴⁰² These programs may require as a condition of new service that reasonable water-saving devices and water reclamation devices be installed.⁴⁰³ The code specifically authorizes suppliers to adopt a water conservation program aimed at reducing individual water demand, including retrofits and tiered pricing.⁴⁰⁴ Programs must be adopted after notice and hearing, and violation of the program is a misdemeanor.⁴⁰⁵ Water Code section 375 is routinely invoked as a source of authority for water neutral programs.

Distinct from conservation, the Water Code separately authorizes water suppliers to declare a water shortage emergency.⁴⁰⁶ Suppliers must find that there is insufficient water to meet ordinary demands without jeopardizing the amount of water necessary “for human consumption, sanitation, and fire protection.”⁴⁰⁷ Unless there is potential for immediate interruption in service, a supplier must

400. For example, the California Water Code provides that any county water district has the power to restrict water use during any existing or threatened shortage and “may undertake a water conservation program to reduce water use” CAL. WATER CODE §§ 31026, 31035 (West 1984). Cf. *Thum v. Bd. of Dirs. of the Monterey Peninsula Water Mgmt. Dist.*, No. H039566, 2014 Cal. App. Unpub. LEXIS 9159, *48–53 (Dec. 23, 2014) (unpublished appellate decision holding that water district had broad power to regulate household water fixtures).

401. See, e.g., *Bldg. Indus. Ass’n of N. Cal. v. Marin Mun. Water Dist.*, 235 Cal. App. 3d 1641, 1644 (1991) (“[A] water district is necessarily entrusted with extensive discretion to accomplish its challenging [water management] task.”); *Butte Co. W.U. Ass’n v. R.R. Comm.*, 185 Cal. 218, 230 (1921) (“[A] water company . . . has not the power to take on new consumers without limit. . . it is not always easy to determine just when the limit of supply is reached, and the factor of safety which should be allowed against exceptional seasons may vary from locality to locality The matter is one of judgment.”); see also *Tarlock & Bates*, *supra* note 213, at 10584–86, fn. 35 (2008) (describing the duty to serve and concluding that modern courts recognize that “in the absence of fraud, corruption or arbitrary action,” the question of whether to extend water service to new customers is within the discretion of water suppliers and “beyond judicial control”) (citing *Dateline Builders*, 194 Cal. Rptr. at 266).

402. WATER § 375(a) (West 2009).

403. *Id.* § 1009.

404. *Id.* § 375(a) (“[A]ny public entity which supplies water at retail or wholesale for the benefit of persons within the service area [may] . . . adopt and enforce a water conservation program to reduce the quantity of water used by those persons for the purpose of conserving the water supplies of the public entity.”); see also *id.* § 375(c) (defining “public entity” as “city, whether general law or chartered, county, city and county, special district . . . or any other political subdivision of the state.”); *id.* § 375(a) (declaring that water provider must hold a public hearing and adopt findings of necessity).

405. *Id.* §§ 376, 377.

406. *Id.* § 350; see generally Dennis Herman, *Sometimes There’s Nothing Left To Give: The Justification for Denying Water Service to New Consumers to Control Growth*, 44 STAN. L. REV. 429, 436 (Jan. 1992) (describing use of emergency moratorium under Water Code section 350).

407. WATER § 351.

hold a public hearing prior to declaring an emergency.⁴⁰⁸ Once an emergency is properly declared, a supplier may take actions that will, in its discretion, “conserve the water supply for the greatest public benefit with particular regard for domestic use . . .,” including a moratorium on new service connections or, arguably, a water neutral program.⁴⁰⁹ Where an emergency exists, the water shortage emergency provisions of the Water Code may provide a basis for adoption of a water neutral program.

In some instances, the California Environmental Quality Act (CEQA)⁴¹⁰ may provide a framework for public agencies to adopt a water neutral requirement for a specific project.⁴¹¹ CEQA applies when a public agency makes a discretionary decision that may have an adverse physical effect on the environment.⁴¹² If the underlying project requires compliance with CEQA, such as in the case of a subdivision approval, then the environmental analysis will provide a framework for identifying the water supply impact of the project and for imposition and enforcement of mitigation measures. CEQA does not provide additional authority to a supplier, but the process can provide structure for assessing and imposing offsets.

Water suppliers that approve a water neutral program by way of ordinance or resolution, sometimes as part of a broader water conservation plan, typically invoke some combination of the above authorities. Recitals typically identify both Article X section 2 and Water Code section 375 et seq., with the addition of the police power (for cities and counties) and specific organic authorities, where they exist (for special districts).

B. Environmental Compliance for Water Neutral Programs

CEQA applies to discretionary decisions made by public agencies that may have an adverse physical effect on the environment.⁴¹³ A public agency complies with CEQA by preparing one of several types of environmental documents.⁴¹⁴ For water neutral programs, the need for and scope of the environmental review required depends on the circumstances of the program, including the context in which the program is adopted and applied.⁴¹⁵ For example, one water supplier adopted its water neutral policy as a General Plan policy and prepared an EIR for

408. *Id.* § 352.

409. *Id.* § 353; *see* Bldg. Indus. Ass’n. v. Marin Mun. Water Dist., 235 Cal. App. 3d 1641 (1991).

410. *See* CAL. PUB. RES. CODE §§ 21000, et seq. (West 2007).

411. *Id.*

412. *Id.* § 21151(a).

413. *Id.* §§ 21080, 21082.2, 21100, 21151.

414. *See id.* §§ 21080–21080.42 (statutory exemptions); 14 CAL. CODE REGS. tit. 14 §§ 15260–15285 (2014) (statutory exemptions); *id.* §§ 15300–15332 (categorical exemptions).

415. PUB. RES. § 21151(a).

that General Plan.⁴¹⁶ Another water supplier applied its water neutral requirement in the context of an EIR for a mixed-use development project.⁴¹⁷

Water suppliers that adopt their water neutral policies as part of a water conservation plan pursuant to Water Code section 375 sometimes invoke a CEQA exemption in the ordinance adopting the Plan.⁴¹⁸ Water suppliers that invoke exemptions focus on the underlying purpose of water neutral policies, i.e., to conserve water resources by requiring that an action that would normally use resources (new development) not require such resources on a net basis. The range of exemptions thus tends to include those for: 1) “existing facilities;”⁴¹⁹ 2) actions by regulatory agencies for protection of natural resources;⁴²⁰ and 3) actions by regulatory agencies for protection of the environment.⁴²¹ The exemptions invoked sometimes include the so-called “common sense” exemption, under which CEQA does not require preparation of environmental documents if there is no possibility of a significant environmental effect.⁴²² CEQA also identifies exceptions to exemptions, i.e., circumstances under which exemptions may trigger significant environmental impacts.⁴²³ For example, a normally exempt project must prepare an environmental document if there are unusual circumstances, or if the project takes place in a sensitive location.⁴²⁴ Likewise, a project that contributes to a significant cumulative impact must prepare an environmental document, even if the individual impact is otherwise exempt.⁴²⁵

Suppliers adopting a water neutral program or policy should consider whether circumstances are present that trigger the need for CEQA compliance, even if an exemption would otherwise apply. For example, if a water neutral program serves to allow development that would otherwise be precluded due to lack of water supplies, the supplier may need to comply with CEQA.⁴²⁶ In such circumstances, development may be most appropriately described in a separate

416. See *Watsonville Pilots Ass'n. v. City of Watsonville*, 183 Cal. App. 4th 1059, 1065 (2010).

417. *Id.* at 1090.

418. See, e.g., SLO ORDINANCE 3246, *supra* note 135, at 1.

419. 14 CAL. CODE REGS. tit 14 § 15301 (“operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of use”)

420. *Id.* § 15307 (“actions taken by regulatory agencies as authorized by state law or local ordinance to assure the maintenance, restoration, or enhancement of a natural resource where the regulatory process involves procedures for protection of the environment . . . [c]onstruction activities are not included in this exemption”).

421. *Id.* § 15308 (“actions taken by regulatory agencies, as authorized by state or local ordinance, to assure the maintenance, restoration, enhancement, or protection of the environment where the regulatory process involves procedures for protection of the environment . . . [c]onstruction activities and relaxation of standards allowing environmental degradation are not included . . .”).

422. *Id.* § 15061(b)(3) (“[w]here it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA”).

423. See *Berkeley Hillside Pres. v. City of Berkeley*, 60 Cal. 4th 1086 (2015) (describing the process for evaluating exceptions to exemptions).

424. 14 CAL. CODE REGS tit 14 § 15300.2(c).

425. *Id.* § 15300.2(b).

426. *Id.* § 15300.2(a).

CEQA process, such as through a general plan, specific plan, or project-level environmental impact analysis.⁴²⁷ In each case, the specific features and context of a water neutral program will determine the need for and scope of CEQA compliance.⁴²⁸

C. *Costs and Fees Imposed by Water Neutral Programs*

California law governing the ability of water suppliers to adopt and impose fees is complex, and a detailed examination of the types of such fees, legal authorities, and adequacy standards is outside the scope of this article.⁴²⁹ This complexity underscores a need for reform of water financing, which has been identified as key area for improving California water management.⁴³⁰ Generally, when imposing a fee or charge it is important to ensure that the supplier has the authority to levy the fee in question, and that the fee is properly tailored to meet the applicable legal standard.⁴³¹ Fees that do not meet applicable legal standards may be declared an impermissible tax requiring voter approval.⁴³² Several factors will affect the question of whether a fee is defensible, including the authority invoked for the program (i.e., police power or statutory), whether the fee was legislatively adopted for all projects via ordinance or resolution, or established for a specific project, and whether the fee is demonstrated to have a certain degree of relationship to the costs imposed by or the benefit conferred on the new development.⁴³³

For impact fees, mitigation fees, in-lieu fees, and other fees and exactions, a common standard is that there must be a “reasonable relationship” or “nexus” between the impact caused by the development and the charges imposed.⁴³⁴ These

427. Cf. *Watsonville Pilots Assn. v. City of Watsonville*, 183 Cal. App. 4th 1059, 1065 (2010).

428. *Id.*

429. See generally CAL. GOV'T CODE § 66000 et seq. (West 2009); see *id.* § 66001(a) (imposing fees as a condition of property development); *id.* § 66013 (water capacity charges).

430. E.g., PUB. POLICY INST. OF CAL., CALIFORNIA'S FUTURE: WATER 5 (Feb. 2015), available at http://www.ppic.org/content/pubs/report/R_215EH2R.pdf (on file with the *McGeorge Law Review*) (“Three constitutional reforms approved by voters since the late 1970s—Propositions 13, 218, and 26—have improved transparency but also severely limited the ability of local agencies to raise funds to meet critical water sector needs. For robust solutions, California will have to better align its funding laws with the goals of modern water management.”)

431. *Id.*

432. Cf. e.g., *Sinclair Paint Co. v. State Board of Equalization*, 15 Cal. 4th 866 (1997); see generally CAL. CONST. art. XIII C & XIII D (Proposition 218); *id.* art. XIII C § 1(e) (Proposition 26) (fees which exceed the fair or reasonable costs of conferring a benefit, granting a privilege, or providing a service or product to the payor are taxes); cf. GOV'T. § 50076 (fees which exceed the reasonable cost of providing the regulatory activity or service for which they are charged and which are not levied for general revenue purposes may be “special taxes”).

433. *Id.*

434. E.g., HANAK ET AL., PUB. POLICY INST. OF CAL., PAYING FOR WATER IN CALIFORNIA 19–20 (March 2014) (describing Proposition 218 and Proposition 26); *Ehrlich v. City of Culver City*, 12 Cal. 4th 854, 865–66 (1996) (describing Government Code and constitutional requirements for reasonable relationship); see generally

requirements may be imposed by constitutional requirements such as those established by Proposition 218 and Proposition 26, by the California Government Code, or by laws specifically applicable to the adopting entity. Some laws may require a more or less detailed accounting of that relationship, but the basic idea is that the supplier establishing the fee must demonstrate, with reference to evidence, a fair or sensible connection. A fee that is set without reference to the costs of addressing impacts would not have the requisite relationship, and neither would a fee that clearly exceeds the costs of addressing impacts.⁴³⁵ Fees that exceed such costs may be challenged as an unconstitutional tax.⁴³⁶ In some instances, voter approval may be required.⁴³⁷

Another lens for judging adequacy of fees may be whether there is an essential nexus between the impact and the nature of the mitigation, and rough proportionality between the impact and the scope of the mitigation.⁴³⁸ These standards are applicable to decisions that require individuals or entities to dedicate resources—whether funds or property—as part of an approval or entitlement process.⁴³⁹ The best approach for ensuring that the decision meets these standards is to ensure that the supplier identifies and weighs the impacts, costs and benefits, and that the analysis and ultimate decision is supported by reliable evidence documented in a well-maintained record.⁴⁴⁰ There should be a logical path between facts, evidence, and decision.⁴⁴¹

In some circumstances, courts may inquire as to whether there is substantial evidence in the record to support the offset and/or fee in the amount charged.⁴⁴² The substantial evidence standard requires the agency to base its decision on reliable facts, inferences, or assumptions that are supported by the record in front

CAL. CONST. art. XIII C § 1 (Proposition 26); GOV'T § 66000 et seq. (Mitigation Fee Act); *see id.* § 66001(a) (fees imposed as a condition of property development); *see id.* § 66013 (water capacity charges).

435. CAL. CONST. art. XIII C § 1 (Proposition 26).

436. *Id.* (fees which exceed the fair or reasonable costs of conferring a benefit, granting a privilege, or providing a service or product to the payor are taxes); *cf.* GOV'T. § 50076 (fees that exceed the reasonable cost of providing the regulatory activity or service for which they are charged and which are not levied for general revenue purposes may be "special taxes").

437. Fees that are imposed as a condition of project approval are governed by the Mitigation Fee Act (Government Code section 66000 et seq.) and do not require voter approval. *See* CAL. CONST., art. XIID(b)(1). Fees that are not imposed as a condition of project approval may require voter approval if they exceed the reasonable cost of the benefit provided. *Compare* CAL. CONST., art. XIII C § 1 (Proposition 26) (requiring voter approval for certain regulatory fees) *with* Cal. Bldg. Indus. Ass'n v. San Joaquin Valley Air Pollution Control Dist., 178 Cal. App. 4th 120 (2009) (fee imposed "in lieu" of air emissions offsets was not imposed as a condition of project approval and not subject to the Mitigation Fee Act).

438. *See* *Koontz v. St. Johns River Water Mgmt. Dist.*, 133 S. Ct. 2586 (2013); *Dolan v. City of Tigard*, 512 U.S. 374 (1994) (rough proportionality); *Nollan v. Cal. Coastal Comm'n.*, 483 U.S. 825 (1987) (nexus); *see also* *Powell v. County of Humboldt*, 222 Cal. App. 4th 1424, 1439–40 (2014) (applying *Koontz* in California); *see generally* Fernando Villa, *Practice Tips: Koontz Curbs Government Power To Impose Development Fees*, 36 LOS ANGELES LAWYER 14 (Jan. 2014).

439. *See Powell*, 222 Cal. App. 4th at 1439–40.

440. *Id.*

441. *Id.*

442. *See* *Watsonville Pilots Ass'n. v. City of Watsonville*, 183 Cal. App. 4th 1059 (2010).

of the agency.⁴⁴³ The substantial evidence standard does not require scientific certainty or crystal-ball prediction, but allows the supplier to make decisions in the face of uncertainty, and to rely on its discretion and judgment as to that which is reasonably foreseeable, as long as uncertainty is acknowledged and contrary evidence is accounted for. The substantial evidence standard also allows the supplier to choose between differing expert opinions, as long as contrary opinions raised during the proceedings are identified and addressed.

If a water neutral program adopts an offset ratio that is greater than 1:1, it will be even more important that the supplier document the basis for the ratio. The ratio should be supported by engineering judgment, facts, and inferences based on facts where possible. In this regard, however, because the ratios themselves are designed to address uncertainty, ratios are inherently uncertain and a likely topic for expert disagreement. Accordingly, suppliers should clearly identify their reasoning in the record, and invoke their right to exercise discretion based on limited facts and uncertainty. Suppliers should ensure that the record explains all sources of uncertainty, such as unpredictable drought cycles, climate change, instream needs, and imperfect demand planning. Suppliers should also be sure to identify and address contrary opinions. Some water suppliers have taken the approach of starting with a 1:1 ratio, and then increasing the ratio over time based on data received about program implementation.⁴⁴⁴

D. Adequacy of the Record Supporting a Water Neutral Program

The need to ensure an adequate record of decision-making is not a separate category from those described above; a good record is critical to ensuring the defensibility of a water neutral program with respect to issues such as authority, costs, and environmental review.⁴⁴⁵ This is because, as a general rule, absent fraud or malice, courts will review the decisions of water suppliers for legal adequacy, but will not second guess their judgment or exercise of discretion provided that the record establishes the basis for the decision.⁴⁴⁶ Although the standard for record adequacy may technically less stringent in some instances—such as when an agency with the police power adopts a water neutral program via ordinance, thereby exercising broad quasi-legislative authority⁴⁴⁷—decisions are most defensible when records are thorough and clearly establish the basis for the decision.

443. *Id.* at 1080–81.

444. *See supra*, Parts III, IV.E (Soquel Creek Water District offset ratios).

445. *Protect Our Water v. County of Merced*, 110 Cal. App. 4th 362, 362–64 (2003) (“[T]here are at least three immutable rules: first, take great care to prepare a complete record; second, if it is not in the record, it did not happen; and third, when in doubt, refer back to rules one and two.”).

446. *See Bldg. Indus. Ass’n of N. Cal. v. Marin Mun. Water Dist.*, 235 Cal. App. 3d 1641, 1646 (1991).

447. *See Paso Robles Water Integrity Network v. County of San Luis Obispo et al.*, No. CV13-8301, slip op. at 18 (San Luis Obispo Cnty. Ct. Jan. 15, 2015) (describing a court’s limited review of factual bases for quasi-legislative acts).

The record consists of all documents considered by the agency when it made its decision, including those that contain contrary information.⁴⁴⁸ The court must be able to follow the paper trail to discern the agency's decision process.⁴⁴⁹ Water suppliers should consider the use of "findings," i.e., a clear and carefully worded enumeration of considerations and reasoning that support a decision. Findings do not have to be extensive; the goal is not to add a costly paper exercise to the decision-making process. The decision document should refer to specific scientific and technical evidence supporting the supplier's determinations regarding the objectives, costs, offset ratios and other elements of its water neutral program. Findings should identify and address contrary evidence and sources of uncertainty. Findings can be part of an ordinance or resolution, or prepared in a separate document and incorporated by reference. Findings are required by some laws and not by others, but even where not required can be useful in ensuring a defensible record. Findings also help ensure that the water supplier and its customers are well informed about the details of the water neutral program.

VI. CONSIDERATIONS AND RECOMMENDATIONS

For water suppliers, water neutral programs may be a valuable tool in their total supply portfolio. The sample programs discussed above suggest various areas of inquiry for new or evolving water neutral programs. Below are a few general considerations for water suppliers, and several specific recommendations for facilitating awareness and improving the effectiveness of water neutral programs. Where different legal standards may apply, compliance with the most demanding standard is recommended if such compliance is feasible.

A. *General Considerations*

Below are some general considerations for water suppliers that are considering adoption of a water neutral program. These considerations will vary in applicability and importance depending on the identity of the water supplier, the context in which the program is being considered, applicable law, and other factors. Generally, water suppliers should:

448. See generally KATHERINE E. STONE & LISABETH D. ROTHMAN, PREPARING A DEFENSIBLE ADMINISTRATIVE RECORD 4-8 (City Attorneys Department Spring Conference, League of California Cities, May 2004), available at <http://www.cacities.org/UploadedFiles/LeagueInternet/ef/cf6aef99-48e2-46c3-bd1f-caa881ec644b.pdf> (on file with the *McGeorge Law Review*); BILL HIGGINS ET AL., INST. FOR LOCAL GOV'T, AN OUNCE OF PREVENTION: BEST PRACTICES FOR MAKING INFORMED LAND USE DECISIONS 23 (2006), available at http://www.ca-ilg.org/sites/main/files/file-attachments/2006_-_an_ounce_of_prevention.pdf (on file with the *McGeorge Law Review*); CAL. PUB. RES. CODE § 21167.6(e) (West 2007) (listing materials required to be included in a CEQA record).

449. E.g., *W. States Petroleum Ass'n. v. Superior Court*, 9 Cal. 4th 559, 569 (1995).

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1. Design the water program to ensure that it is reasonable to anticipate, within the exercise of the supplier's judgment, that the actions taken will result in appreciable water savings.
2. Consider whether retrofits, if any, are close to saturation.
3. Provide incentives for new development to integrate extraordinary conservation measures into the new development.
4. Provide offset credit for conservation technology and techniques that go beyond minimum legal requirements.
5. Provide quantitative standards and measurable objectives where possible.
6. Provide a method for measuring and monitoring water use, perhaps through water budgets, reporting, and financial consequences for exceeding the allotment.
7. Formally adopt the program by way of ordinance or resolution, in an open public process, after hearing.
8. In the decision and supporting documents, describe a clear logical path, or nexus, between the anticipated impacts of development and the cost of the program (or the benefit to the development).
9. In the decision and supporting documents, describe how cost to a development is roughly proportional to the impact of the development on water demand.
10. In the decision and supporting documents, identify evidence supporting the above logical path, nexus, and rough proportionality, and ensure that evidence is properly maintained in the supplier's records.
11. In the decision and supporting documents, identify and explain contrary evidence.
12. In the decision and supporting documents, identify sources of uncertainty.
13. Accumulate program fees in a specially-created fund, segregate them from other funds, and direct them only toward identified programs.
14. Review the program on a regular basis and correct elements to ensure that the above standards are met.

B. Specific Recommendations

1. Integrate New Conservation Techniques into Water Neutral Programs & Consider Water Neutral as a Tool to Achieve Drought Resiliency and Sustainability Outside the Shortage Context. California water neutral

programs have been primarily focused on toilet and other fixture retrofits.⁴⁵⁰ Such retrofit-only programs have a limited lifespan as eventually most fixtures in a community will undergo retrofit, with most savings being squeezed out at the first retrofit when high-volume fixtures are replaced. Mandatory fixture retrofit laws will speed this phenomenon of “saturation” going forward. Retrofit programs that experience saturation should integrate new conservation techniques to accomplish their water neutral goals including, among other things, recycling, rainwater harvest, graywater use, and stormwater capture. Where feasible, creative and innovative approaches to water neutral should be integrated into water supplier portfolios outside the shortage context, to help foster a closer relationship between the availability of water resources and new development. Water supplier coalitions should consider whether water neutral policies would improve sustainability of water resources on a river or watershed basis.

2. Voluntary Water Neutral Model Ordinance. To facilitate consideration of water neutral in more California communities, standard provisions from existing ordinances and other sources should be collected into a model ordinance. The model ordinance would be a sample ordinance, and suppliers could choose to adopt in whole or in part. The model ordinance should provide water suppliers with both standard and suggested recitals, sample findings, and a suite of optional program elements derived from successful elements of current programs.⁴⁵¹ Suppliers can select from these options to design a program that fits the needs of their community or watershed, as appropriate. The model ordinance should be designed with input from legal, water supplier, and engineering perspectives.

In January 2015 the non-profit Alliance for Water Efficiency announced a nationally-focused sustainable communities project called Net Blue.⁴⁵² In partnership with the Environmental Law Institute and River Network, Net Blue will provide a toolbox for facilitating sustainable community growth through information about conservation and efficiency actions such as water neutral.⁴⁵³ Among other things, the toolbox will include ordinance components that water suppliers can use to design water neutral programs specific to their needs.⁴⁵⁴

3. Improving Information: Measurement, Monitoring, and Reporting. Centralized and standardized electronic information management and collection has been suggested as an improvement for water planning and demand management generally, and in 2014 California enacted measures designed to

450. See Maddaus et al., *supra* note 15, at 107.

451. See METROPOLITAN WATER DISTRICT OF SOUTHERN CAL., MODEL WATER CONSERVATION ORDINANCE (Jan. 22, 2009, v. 2) (providing local jurisdictions with a model ordinance as a tool to be adapted or revised as appropriate to improve water use efficiency).

452. Mary Ann Dickinson, *No Water, No Growth: Are Water-Neutral Growth Policies the Key to Building Sustainable Communities?* NAT'L GEOGRAPHIC (Feb. 2, 2015), available at <http://voices.Nationalgeographic.com/2015/02/02/no-water-no-growth-are-water-neutral-growth-policies-the-key-to-building-sustainable-communities/> (on file with the *McGeorge Law Review*) (posted by Alliance for Water Efficiency).

453. *Id.*

454. *Id.*

further this goal.⁴⁵⁵ As the state continues to improve information management, water neutral programs should be identified as a specific category for conservation reporting. For example, this field could be added to urban water management plan reporting requirements or expressly identified by state guidance as one of the programs that should be reported as a demand management measure. The state should consider routinely collecting and making available supplier-created water conservation plans adopted pursuant to Water Code section 375 et seq. The plans could be created and submitted consistent with the protocols that are developed for urban water management plans.

Where feasible, water suppliers should also consider the potential to integrate more sophisticated approaches to measuring, monitoring, reporting, and enforcing water use. Water suppliers should consider requiring water budgets, measurement and reporting technology, feedback processes, and enforcement mechanisms for new development. Where funding and political will allow, water suppliers might consider integrating these requirements into existing development through retrofit with smart meters and other technologies. Project-specific assessment of the challenges encountered by pioneers in water budgets, reporting, and enforcement techniques (such as the East Bay Municipal Utility District and Santa Fe, New Mexico, discussed *supra*) would provide a basis for further development of such approaches.

V. CONCLUSION

Water neutral programs can be a valuable tool in a water supplier's portfolio, but may not be appropriate in every jurisdiction. Programs should be tailored to the specific needs and circumstances of the supplier, the community, and the water resource. Communities should consciously choose specific goals for their water neutral programs. Water neutral programs may be designed to support growth where growth is desirable, improve drought resiliency, and/or facilitate an environmentally and economically sustainable approach to allocation of water between new and existing uses.

Consideration of water neutral programs should be encouraged at local, regional, or watershed levels. Water suppliers should consider integrating a broader range of conservation techniques, including stormwater, recycling, graywater, and similar tools for augmenting supply. Next steps should include development of tools such as model ordinance provisions, assessment of opportunities to support new technology, and improvement of information systems including measuring, monitoring, and reporting water use within the service areas of water suppliers, and between water suppliers and the state.

455. See *supra* note 53 (describing SB 1420 and AB 2067).

CHAPTER XXV WATER

25-1	General Regulations
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25-3	Water Waste
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25-1 GENERAL REGULATIONS.

25-1.1 Definitions.

Editor's Note: Previous subsection 25-1.1 pertaining to the prohibition of leaky appliances and Code 1953, § 27-1; Code 1973, § 35-1 and SFCC 1981, § 4-14-1 was repealed and replaced by Ordinance No. 1991-4.

Editor's Note: The definitions affordable housing, applicant, consumptive use water rights, development project, excess water rights, transferor, undesignated water rights and water credit in Section 25-1.1 SFCC 1987 shall be effective on January 1, 2010.

As used in this section:

Affordable housing means housing meeting the criteria for affordability as certified by the city's office of affordable housing including, but not limited to, housing opportunity program units, Santa Fe homes program units, low priced dwelling units as defined in Chapter XXVI SFCC, affordable units located in city sponsored projects.

Applicant means the person or entity seeking to transfer water rights to the city's permit for dedication to a development in satisfaction of its water budget or for deposit in the city's water bank.

Building means a structure or parts of a structure covered and connected by a permanent roof and intended for shelter, housing or enclosure. As defined here, a building may be attached to other buildings provided it is separated from other buildings by fire resistive construction.

Santa Fe watershed means that area owned by the city or the U.S. Forest Service lying east of the Santa Fe grant, maintained for the city's water supply.

Sports field means a turf area used primarily for organized sports such as football, soccer, baseball, etc.

Sub-meter means a device owned by the property owner and installed for the purpose of measuring the consumption of water for individual dwelling units as set forth in Rule 18 of Exhibit A, Chapter 25 SFCC 1987.

Transferor means a person or entity to which the city has issued a water transfer certificate following successfully transferred water rights to the city's permit and conveyance of water rights title to the city.

Undesignated water rights mean water rights which have not been designated for credit on a development water budget.

Warm season grass means grass species that have active growth above seventy (70) degrees Fahrenheit, later germination, earlier dormancy and less water required. Species include but are not limited to: Buffalo Grass, Blue Grama Grass, Zoysiagrass, St. Augustine Grass and Bermudagrass.

Wastewater for purposes of this chapter means the liquid and water carried waste or sewage from residential dwellings, commercial buildings, industrial and manufacturing facilities and institutions whether treated or untreated.

Water means water provided through any system through which the residents of the city receive their water or any extensions thereof over which the city has jurisdiction.

Water credit means a consumptive use water right that has been transferred to the city's permit, title to which has been conveyed to the city, and which is held in the city's water bank in the name of a transferor.

Water service connection means the physical connection of a property to the city water system.

Water shortage means a condition wherein the real availability of the supply of water is less than the projected demand for water as defined by the city upon review of available data.

(Ord. #1991-4, §1; Ord. #2001-33, §1; Ord. #2003-25, §27; Ord. #2003-26, §2; Ord. #2005-2, §3; Ord. #2006-53, §§1,2; Ord. #2006-60, §5; Ord. #2009-38, §9; Ord. #2010-30, §1)

25-1.2 Compliance with Chapter XXV.

All city water service customers shall comply with the provisions of Chapter XXV. SFCC 1987. (Ord. #2009-54, §1)

25-1.3 Compliance with Chapter 14.

A. Legislative Findings.

(1) The city has limited water supplies. Much of the city's water supply is dependent on annual precipitation, and in times of shortage or drought, this dependence can create significant variability in the seasonal and annual water supply available to the city and its water customers.

(2) The governing body has recognized through the adoption of different ordinances concerning water supply and demand that it needs to aggressively pursue available avenues for increasing the city's water supply.

such a serious nature as to require immediate measures and abatement, the director or designee may take steps to temporarily shut off the water source or discontinue the water service pursuant to a twenty-four (24) hour notice as set forth in Rule No. 9 of Exhibit A of this chapter. The city may affect such measures by entry upon private premises if the water service or city water meter is located on private premises. Any violation which depletes the water available to the water system during a water emergency management implementation stage shall be deemed to deplete water essential to maintain fire flows and shall be cause for discontinuance of water service.

(3) Municipal court.

(a) For water users within the city limits but not a municipal water system customer, violations shall be a petty misdemeanor subject to prosecution in the municipal court.

(b) For municipal water system customers, depending upon the specific circumstances of the violation, the city may choose not to apply administrative fees and instead file a complaint in municipal court.

(4) Injunctive relief. In addition to any other relief, the city may seek injunctive relief in the district court and shall be entitled to reasonable attorney's fees and costs.

(5) Public nuisance. The city may, in addition to any other relief, seek to abate any violation that constitutes a public nuisance as set forth in Section 10-9 SFCC 1987. (Code 1953, §27-5; Code 1973, §35-5; SFCC 1981, §4-14-4; Ord. #2001-34, §3; Ord. #2003-25, §29; Ord. #2006-53, §3)

Editor's Note: Exhibit A, referred to herein, may be found at the end of this chapter.

25-1.5 Reserved.

Editor's Note: Former subsection 25-1.5, Utility Company to Furnish Water Supply Information, previously codified herein and containing portions of Code 1953, §27-4; Code 1973, §35-4; SFCC 1981, §4-14-5 and Ordinance No. 1991-4, was repealed in its entirety by Ordinance No. 2003-25, §30.

25-1.6 Inspection.

Whenever necessary to make an inspection to enforce any provision of this chapter, or whenever the city has probable cause to believe that there exists any condition which constitutes a violation of this chapter, the city may enter such premises at all reasonable times to inspect the same. In the event the owner or occupant refuses entry after a request to enter and inspect has been made, the city is hereby empowered to seek assistance from any court of competent jurisdiction in obtaining such entry. (Code 1953, §27-6; Code 1973, §35-6; SFCC 1981, §4-14-6; Ord. #1991-4, §4; Ord. #2003-25, §31; Ord. #2006-53, §4)

25-1.7 Illegal Use of Hydrants or Connections to Water Sources.

It is unlawful to turn the water on or off at any hydrant or connection without permission from the owner of the hydrant or the fire department. (Code 1953, §27-7; Code 1973, §35-7; SFCC 1981, §4-14-7; Ord. #1991-4, §5)

E. If any applicant's total cost of connection to the water system, including costs incurred by extending the service line, purchasing a meter (not to include utility expansion charges or similar charges) and physically connecting to a residence is greater than the cost of drilling a new domestic water well, the domestic water well permit application shall be approved regardless of the property's distance from the city water distribution lines. The applicant is responsible for demonstrating the cost of drilling a domestic water well on the subject property and shall present to the city a written quote by a well driller licensed by the state of New Mexico. The city shall determine whether the bid and cost analysis submitted are reasonable. Upon completion of any well drilled under this exemption, the applicant shall not use any water from the well before a sworn affidavit by the well driller is submitted to, and accepted by, the city showing the actual costs of drilling the well. If the actual cost of drilling the well exceeds the total cost of connection to the city water system, the well shall be capped and the city shall provide water service to the property. All applicable fees and costs of connection shall be paid by the applicant.

F. For domestic water well permit applications approved within the municipal boundaries the following conditions shall be met:

(1) The well shall be metered to city specifications and monthly usage shall be recorded and reported annually to the city water division.

(2) In certain parts of the city, as delineated by the city water division, the well shall be drilled a minimum of fifty feet (50') into the Tesuque formation and a seal constructed to prevent the mixing of water between the Tesuque and Ancha formations.

(3) The well shall be constructed to standards established by the city of Santa Fe and shall be drilled by a licensed well driller.

(4) The well owner shall agree to dedicate a ten to twenty foot (10' - 20') wide easement along the necessary property lines for the installation of future infrastructure, as delineated by the city water division.

(5) The well owner shall be subject to all city ordinances and penalties governing the amount and usage of water extracted from domestic water wells as set forth in this chapter.

(6) The well owner shall be subject to subsection 14-8.12(F)(3) SFCC 1987, requiring the well owner to demonstrate that the water demand created by the use of the structures for which the domestic water well is sought will be entirely offset in accordance with the annual water budget procedures and subsection 14-8.13(F) prior to use of the well.

(7) The city may impose further conditions as necessary to implement the city's ordinances, to prevent waste and conserve the supply of water and for the public health, safety and general welfare of its citizens.

G. Any violation of this subsection shall be subject to penalties and enforcement as provided under this chapter.

H. The applicant may appeal the written decision of the city's water division director to the public utilities committee as set forth in Rule No. 22, paragraphs B, C, and D of Exhibit A of this chapter. Any applicant aggrieved by the final decision of the governing body may appeal the decision to district court pursuant to the New Mexico rules of civil procedure and relevant statutes.

Editor's Note: Exhibit A, referred to herein, may be found at the end of this chapter.

I. Staff shall report to the governing body within one (1) year on the operation of this ordinance, suggested improvements for monitoring and regulations.

(1) Properties receiving city water service shall connect to the city's sewer system. If a property does not connect to the city's sewer system, the property shall not be connected to the city's water system.

(2) Water service approved under this section shall be only for the specific use and amount for which the application was approved.

(3) The property owner shall disconnect and abandon all existing wells according to the rules and regulations established by the water division. Proof of compliance with such rules and regulations shall be submitted to the water division within thirty (30) days of connection to the city's water system.

(4) The property owner and all future owners of the property obtaining city water service under this section shall be required to pay all applicable rates, charges and fees for city water service.

(5) Requirements set forth in Chapters 14 and XXV SFCC 1987 and all other rules and regulations pertaining to the use of the city's water service are also a condition of service.

(6) The property owner shall be required to bring water rights or retrofits pursuant to Section 14-8.13 SFCC 1987.

(7) The property owner shall agree not to join the Agua Fria traditional historic community.

I. *Water/Wastewater Review Team.*

(1) All applications for city water service connections for properties outside the presumptive city limits shall be reviewed by the water/wastewater review team (WWRT). The team shall meet regularly and shall be made up of city and county staff from the water division, the wastewater division, the city attorney's office, the county attorney's office, the land use departments and the office of affordable housing. The team shall evaluate the completeness of the application and its compliance with this section. Applications shall include the following:

(a) A map of the proposed project in relation to the existing city limits and the presumptive city limits;

(b) A detailed description of the proposed development including the type and size of proposed land uses;

(c) The health, safety, public welfare or other legal reason for the connection;

(d) A site water budget;

(e) Documentation from the county of Santa Fe that county water service is not available;

(f) Documentation from the wastewater division regarding sewer availability; and

(g) A certified Santa Fe Homes Proposal as set forth in Section 14-8.13 SFCC 1987 if applicable.

(2) If the WWRT finds the connection feasible and the legal reasons compelling, it shall submit a report to the public utilities committee of the city, the governing body and the board of county commissioners for consideration of an agreement between the city of Santa Fe and Santa Fe county

A. The governing body finds and determines that encouraging and requiring the adoption of water conservation strategies is an effective and low cost means to balance water demands with limited available water supplies and production capabilities. The governing body further recognizes that as a consequence of implementing water conservation regulations, reduction in water use provides the following benefits to the city and its citizens:

- (1) Potential for reduction of individual residential and commercial customers' water and sewer bills.
- (2) Serves as a critical interim source of supply while additional supply sources are being brought on line.
- (3) Reduces peak summer demands thereby reducing short and long-term system costs.
- (4) Enhances the local environment by minimizing transport of fertilizer, pesticide, and other contaminants from runoff to surface waters and deep percolation to ground waters. Enhances the global environment by reducing energy consumption associated with water production, treatment, and distribution.

B. It is hereby declared, because of the city's immediate and long-term limited water supplies and the overall benefits of water conservation, that the city promote and require water use efficiency strategies for the public health, safety, and general welfare of its citizens.
(Ord. #1997-17, §5)

25-2.5 Conservation Signage and Literature Distribution.

A. Public, semi-public, and governmental restroom and shower facilities shall post not less than one (1) water conservation sign in each restroom and shower facility, the size of which shall not be less than eight and one-half (8.5") inches by eleven (11") inches. Such entities may use a city-provided sign or develop their own sign using city-provided text, the text of which shall cite this section. A "public facility" shall not include those facilities solely used by the entity's employees. A "semi-public facility" shall include all private clubs and fraternal organizations.

B. Hotels, motels, and other lodging facilities shall provide a water conservation informational card or brochure in a visible location in each guest room. Such facilities may use city-provided literature or develop their own using city-provided text. Lodging facilities shall not provide daily linen and towel changing for those guests staying multiple nights unless the guest specifically requests each day that the linen and towels be changed.

C. Retail plant nurseries shall provide their "end-use customers" with city-provided low water use landscape literature and water efficient irrigation guidelines at the time of sale of any outdoor perennial plants. An "end-use customer" is the person or persons who will ultimately own the plant material. A landscape contractor or architect is not an end-use customer. In order to facilitate the purchasing of low water use plants, nurseries are strongly encouraged to tag or sign their low water use plants that require little to no supplemental watering once established. For the sale of all turf or grass seed or sod, the customer shall be given city-provided literature indicating the restrictions to planting water consumptive turf, per Chapter XIV.

D. Landscape contractors, maintenance companies and architects shall provide their prospective clients with city-provided low water use landscape literature and water efficient irrigation guidelines at the time of presenting a service contract to the prospective client. Landscape professionals are strongly encouraged to educate their customers regarding the operation of their timed irrigation systems.

(6) Installation. Water-conserving fixtures shall be installed in strict accordance with the manufacturers' instructions to maintain their rated performance.

(7) Certificate of compliance. For all new and remodeling construction, all of the requirements regarding water conserving devices mentioned in subsections 25-2.6 B(1) SFCC 1987 through 25-2.6B(6) SFCC 1987 shall be certified by a certificate of compliance by a licensed mechanical contractor or plumbing permittee before or at the time of the final plumbing inspection.

(8) Authority to permit exceptions. The city water division director upon advice of the city plumbing inspector shall have the authority to permit exceptions to subsections 25-2.6 B(1) through 25-2.6B(7) SFCC 1987 in any case necessary to maintain adequate health and sanitation standards.

(9) Existing nonresidential water users failing to retrofit their facilities by September 8, 2003 and existing properties with more than three (3) rental units failing to retrofit their facilities by February 28, 2008 (eighteen (18) months after the adoption of this subsection), shall be subject to four (4) times the administrative fees set forth in subsection 25-1.4A(1) SFCC 1987. After a citation for failing to retrofit has been issued, the water user shall have sixty (60) days to obtain such retrofits. During that sixty (60) day period, no further citations shall be issued. After that sixty (60) day period, the water service shall be discontinued following notice as set forth in Exhibit A, Rule 9, paragraph D.3 of this chapter.

Editor's Note: Exhibit A, referred to herein, may be found at the end of this chapter.

C. *Eating Establishments.* All public and private eating establishments shall provide water or other beverages only upon request. Eating establishments serving beverages in single-serving containers shall only serve an accompanying glass if specifically requested by the customer. These provisions shall be clearly communicated to the customer in at least one (1) of the following manners: on the menu, by use of a "table tent" or similar signage on the table, or posting in a location clearly visible to all customers. All catering and banquet operations shall comply with the provisions of this subsection.

D. *Lodging Restrictions.* Lodging facilities shall not change the sheets and towels more than once every four (4) days for guests staying more than one (1) night unless there is a justified public health reason. Guests shall be informed of this requirement in writing at the time of check-in. (Ord. #1977-17, §7; Ord. #2001-34, §3; Ord. #2003-31, §1; Ord. #2006-53, §6)

25-2.7 Outdoor Conservation.

A. *Outdoor Irrigating Periods.* Outdoor irrigation is prohibited between 10:00 a.m. and 6:00 p.m. from May 1 through October 31. It is recommended that outdoor irrigation be limited to no more than three (3) days per week, recognizing that low-water use plants and native vegetation require less irrigation. The use of grey water meeting applicable standards or water harvested from precipitation is encouraged.

B. *Exemptions:*

(1) Nursery stock. Plants being irrigated for retail or wholesale sale are exempt from paragraph A, above.

(2) Licensed landscape maintenance and contracting companies. All manual watering by landscape maintenance and contracting companies licensed with the state of New Mexico construction industries division and registered with the city of Santa Fe business registration unit are exempt from paragraph A, above. Landscape companies setting timed irrigation systems shall ensure that the systems comply with paragraph A.

(2) Sports fields or golf courses created prior to this date which have artificial turf shall not convert to natural turf.

(3) Sports fields or golf courses created prior to this date which have natural turf may be permitted to rehabilitate the natural turf if the area needing to be rehabilitated does not exceed seventy-five percent (75%) of the turf area. Rehabilitation of more than seventy-five percent (75%) shall not be permitted. Such turf areas in excess of seventy-five percent (75%) shall be replaced with artificial turf.

B. This section shall apply to all customers of the city water system except city owned sports fields or golf courses or to sports fields or golf courses which are part of a public or private preschool, elementary school, junior high school, high school, college or university.

C. As appropriate, violations of this section shall be considered a misdemeanor punishable as set forth in Section 1-3 SFCC 1987. In addition, the city may discontinue water service following a twenty-four (24) hour notice as set forth in Rule No. 9 of Exhibit A, Chapter XXV SFCC 1987 or pursue enforcement of these specific performance requirements in an appropriate court of law.

(Ord. #2003-28, §3)

Editor's Note: Exhibit A, referred to herein, may be found at the end of this chapter.

25-2.10 Reserved.

Editor's Note: Former subsection 25-2.10, Rainwater Harvesting Barrel Rebate Program, previously codified herein and containing portions of Ordinance Nos. 2003-29 and 2006-53 was repealed in its entirety by Ordinance No. 2008-50.

25-2.11 Other Water Conservation Programs.

The governing body may adopt other water conservation programs, including but not limited to, rebates or vouchers for water saving devices. Such programs shall be adopted by resolution and shall not exceed funds allocated by the governing body each fiscal year. No water user shall be eligible for both a rebate or voucher and a retrofit credit for any specific water saving device. (Ord. #2003-29, §2)

25-2.12 Domestic Water Leak Repair Loan Program.

A. *Legislative Findings.* The governing body has determined the following:

(1) The city has limited water resources especially in years of drought;

(2) The city of Santa Fe encourages the community to conserve water in various ways;

(3) Leaking toilets, leaking water service lines, and leaking fixtures may account for a significant portion of residential water consumption; and

(4) The costs associated with water leak repair can prove discouraging or prohibitive for many residential water customers.

B. The city shall provide loans for the purpose of water leak repair provided the following are met:

- (1) All water customers of the city water system whether located within the city limits or not;
 - (2) All city effluent customers whether located within the city limits or not;
 - (3) All customers of the city waste water system whether located within the city limits or not;
- or
- (4) All private well users located within the city limits.

B. The use of the word water in Section 25-3 shall mean potable water, stormwater, grey water and effluent.
(Ord. #2006-53, §11)

25-3.2 Wasting Water Prohibited.

Editor's Note: Prior ordinance history includes portions of Ordinance No. 1991-4 and 2001-33.

A. No person, firm, corporation, or county, state, or federal facility or operation, to the extent allowed by law, or municipal facility or operation shall waste water. Wasting water shall include the following:

(1) The pumping, flow, release, escape, or leakage of any water from any pipe, valve, faucet, irrigation system or facility onto any hard surface such that water accumulates as to either create individual puddles in excess of ten (10) square feet in size or cause flow along or off of the hard surface or onto adjacent property or the public right-of-way, arroyo, or other water course, natural or manmade;

(2) During the irrigation of landscaping, the escape or flow of water away from the landscaping plants being irrigated even if such flow is not onto a hard surface; or

(3) The nonbeneficial use of water including, but not limited to, leaks to indoor and outdoor plumbing system (faucets, hose bibs, showerheads, toilets, etc.) in excess of 0.25 gallons per minute. Residential water users, both single family and multifamily are exempt from the indoor plumbing aspect of this restriction.

B. The following are not considered wasting water. However, water used in such a manner shall be minimized:

(1) The incidental runoff caused by vehicle washing provided that a shut-off-nozzle is used;

(2) The periodic draining of swimming pools and spas;

(3) Flow resulting from temporary city water system failures or malfunctions;

(4) Water applied, such as in the cleaning of hard surfaces, to prevent or abate public health, safety, or accident hazards when alternate methods are not available. The washing of outdoor eating areas and sidewalks is not included in this exemption;

(5) Flow resulting from vandalism, high winds, emergencies, and acts of God;

(6) The occurrence of an unforeseeable or unpreventable failure or malfunction of plumbing or irrigation system hardware, prior to the issuance of a formal warning notice issued to the water user as set forth in subsection 25-1.4 SFCC 1987;

(7) Flow resulting from firefighting or routine inspection of fire hydrants or from fire training activities;

A. Rates and charges related to water service by the Santa Fe municipal water system are hereby adopted by reference and incorporated as part of this chapter as Exhibit B. ** (Ord. #1995-19, §1; Ord. #2000-01, §1; Ord. No. 2001-11, §1; Ord. #2002-24, §4; Ord. #2004-18, §1; Ord. #2004-29, §1; Ord. #2005-2, §§12-16; Ord. #2006-53, §§37-43; Ord. #2007-40, §15; Ord. #2008-7; Ord. #2009-2, §1; Ord. #2010-6, §1; Ord. #2013-27, §1; Ord. No. 2016-39 § 11)

25-4.3 Commercial Water User Rebate Regulations.

A. *Purpose.* The purpose of this subsection is to provide rebate incentives for commercial water users to lower water consumption through the installation and use of high-efficiency water-saving equipment or technology.

B. *Commercial Water User.* For purposes of this subsection, a commercial water user is a City of Santa Fe water division customer with a commercial sector designation within the current billing system that has installed high-efficiency water-saving equipment. Commercial water users include schools and governmental entities.

C. *Applicability of Commercial Water User Rebate.*

(1) The city water conservation office shall apply the one-time rebate to an applicant's bill after one (1) year of water use monitoring and an evaluation of water savings. For new commercial customers, the one (1) year monitoring period will begin after the water saving equipment or technology is installed, not at the time water service is established.

(2) The rebate shall be applicable to water saving hardware or systems and for complex or untested measures which shall be verified by the city.

(3) An applicant shall coordinate with the water conservation office prior to the installation of retrofits or high efficiency water saving equipment.

(4) The rebate amount shall be based on the amount of water the high efficiency water saving equipment has saved.

D. *Application for Commercial Water User Rebate.* A new or existing commercial water user may apply for a rebate, regardless of meter size. An applicant for a commercial water user rebate shall provide the following information on the application:

(1) The address and account of the commercial water user to show that the commercial water user is a City of Santa Fe water utility customer;

(2) The high-efficiency water-saving measures, including hardware or systems that relate to the commercial water user's commercial water processes that minimize water use and eliminate water waste;

(3) Data to show that at least eighty percent (80%) of water fixtures are water efficient and free of leaks; and

(4) An estimate of the amount of water the commercial water user has saved as a result of the high-efficiency water-saving measures.

E. *Application Evaluation.*

Editor's Note: Prior ordinance history includes portions of Ordinance Nos. 1996-16, 1996-20, 2000-30, 2000-40, 2002-17, 2003-12, 2005-2.

25-5.1 Short Title.

This section may be cited as the Water Emergency Management Plan Ordinance. (Ord. #2006-53, §19)

25-5.2 Purpose.

The purpose of this section is to provide the city the means to implement measures for controlling water use in response to water-system-related emergencies or water emergencies due to catastrophic events or prolonged drought that may disrupt systems operations or the sources of water supply. (Ord. #2006-53, §20)

25-5.3 Policy.

Because of the conditions prevailing in the City of Santa Fe, the general welfare requires that the city maximize the beneficial use of its available water resources to the extent to which it is capable, and that the conservation of water is to be practiced with a view to the reasonable and beneficial use thereof and to avoid waste or unreasonable use, in the interest of the citizens of the City of Santa Fe and for the public health, safety and welfare. (Ord. #2006-53, §22)

25-5.4 Declaration of Water Emergency.

The city manager is authorized to determine and declare that a water emergency exists in any and/or all parts of the City or County of Santa Fe that is served by the city water system if any of the following occur:

A. The water division director reports the occurrence of any of the following:

- (1) A general water supply shortage due to increased demand or limited supply;
- (2) Distribution or storage facilities of the city water system are inadequate to meet demand or minimum quality standards; or
- (3) A disruption of the supply, storage, or distribution facilities of the city water or wastewater systems.

B. An unforeseeable disaster or water emergency such as an earthquake, or other catastrophic event affecting the Santa Fe or Rio Grande river watershed, or groundwater supply, or other major disruption in the water supply.

C. A foreseeable water emergency, such as extended drought conditions.
(Ord. #2006-53, §24)

25-5.5 Water Emergency Management Plan.

Editor's Note: Exhibit B, C and D referred to herein, may be found at the end of this chapter.

25-5.7 Water Emergency Management Plan Applications.

A. The water division director shall provide data, comparing the operational water system supply to the operational water system demand, to the city manager by April 15 of each year or as necessary to determine the appropriate water management plan.

B. If the operational water system supply as determined by the water division director's sole discretion, equals between eighty percent (80%) and ninety-nine percent (99%) of operational water system demand, the city manager may declare a "Water Warning - Orange" water emergency implementation stage. If the operational water system supply as determined by the water division director's sole discretion, is less than eighty percent (80%) of operational water system demand, the city manager may declare a "Water Crisis - Red" water emergency implementation stage.

C. For purposes of determining the appropriate water emergency implementation stage, operational water system supply is defined as the sum of the following sources of supply according to the administrative procedures established by resolution of the governing body:

- (1) Canyon Road treatment plant;
- (2) City wells;
- (3) Buckman wells; and
- (4) Buckman direct diversion treatment plant.

D. For the purposes of determining the appropriate water emergency implementation stage, the operational water system demand shall be determined according to the administrative procedures established by resolution of the governing body and in a manner consistent with the Long Range Water Supply Program upon its adoption.

E. The administrative procedures for determining the operational water system supply and demand shall be available at the city's water division.
(Ord. #2006-53, §30)

25-5.8 Announcement and Publication of Water Emergency Management Plan.

Upon the implementation of the water emergency management plan as set forth in subsection 25-5.6 SFCC 1987, the city shall give public notice by public announcement and by publishing a notice giving the extent, terms and conditions respecting the use and consumption of water a minimum of once a day for three (3) consecutive days in a daily newspaper of general circulation in Santa Fe. The provisions of the water emergency management plan to be implemented shall become effective immediately upon public announcement. Upon such public announcement and publication of notice, proper notice shall be deemed to have been given to each customer of the city water system or other party affected by the water emergency management plan. (Ord. #2006-53, §32)

25-5.9 Reserved.

B. Pollution of the city's drinking water supply is harmful to the environment and impairs domestic, commercial, industrial, recreational and other beneficial uses of water resources.

C. Pollution of the city's drinking water supply creates a public nuisance.

D. The purpose of this section is to prohibit the discharge of any pollutant to the ground surface or the subsurface in order to protect, preserve, maintain and conserve existing and future potable well water supplies and source-water resources.

E. This section together with Section 13-2 SFCC 1987 serves to implement the relevant and applicable policies, principles and standards inherent in federal legislation and state policy pertaining to source-water protection.

(Ord. #2005-4, §3)

25-6.3 Definitions.

For the purpose of this section, the following definitions shall apply:

Abate means to bring to a halt, eliminate or, where that is not possible or feasible, to suppress, reduce, or minimize.

Best management practices means the best combination of structural and nonstructural facility management practices and controls working together to reduce impairments to water quality. Structural practices may include the construction of diversions, sediment basins, terraces, etc. Nonstructural practices include the manner in which resources and facilities are selected, designed, implemented, maintained and managed.

City means the city of Santa Fe.

Clean Water Act means the federal Water Pollution Control Act (33 U.S.C. 1251 et seq.), and any subsequent amendments thereto.

Hazardous material means any material, including any substance, waste, or combination thereof, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may cause, or significantly contribute to, a substantial present or potential hazard to human health, safety, property, or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

Pollutant means anything which causes or contributes to pollution to the surface or groundwater. Pollutants may include, but are not limited to: paints, varnishes, and solvents; oil, anti-freeze, and other automotive fluids; nonhazardous liquid and solid wastes, refuse, rubbish, garbage, litter, or other discarded or abandoned objects, articles, and accumulations, so that same may cause or contribute to pollution; pesticides, herbicides, and fertilizers; hazardous substances and wastes; sewage; dissolved and particulate metals; animal wastes; wastes and residues that result from constructing or remodeling a building or structure (including but not limited to sediments, slurries, mud, plasters, and concrete rinsates); and noxious or offensive matter of any kind.

Pollution means the human-made or human-induced degradation of the water quality by waste to a degree which unreasonably affects, or has the potential to unreasonably affect, either the source water used by the city for beneficial uses or the facilities which serve these beneficial uses.

Premises means any lot or combination of contiguous lots held in single ownership and the buildings, structures or other appurtenances thereon.

Source-water pollutant discharge means the spilling, leaking, pumping, pouring, emitting, emptying, or dumping of a substance containing pollutants in a location and manner where there is a reasonable probability

enter and inspect has been made, the city is hereby empowered to seek assistance from any court of competent jurisdiction in obtaining such entry. (Ord. #2005-4, §8)

25-6.8 Authority to Sample, Establish Sampling Devices, and Test.

During any inspection as provided herein, the city may take any samples and perform any testing deemed necessary to aid in the pursuit of the inquiry or to record site activities. In the event the owner or occupant denies permission to sample, establish sampling devices, and test, the city is hereby empowered to seek assistance from any court of competent jurisdiction in obtaining such samples, sampling devices, or tests. (Ord. #2005-4, §9)

25-6.9 Requirement to Eliminate Source-Water Pollution Discharges.

The city may require by written notice that a person responsible for a source-water pollution discharge immediately, or by a specified date, discontinues the discharge and, if necessary, implement best management practices, to eliminate the source of the discharge to prevent the occurrence of future source-water pollution discharges. Best management practices shall be as outlined by the city's safe drinking water and source-water protection administrative regulations and procedures adopted by resolution of the governing body. The city shall make available to the public the safe drinking water and source-water protection administrative regulations and procedures. (Ord. #2005-4, §10)

25-6.10 Violations; Penalties, and Enforcements.

A. It shall be unlawful for any person to violate any provision or fail to comply with any of the requirements of the Source-Water Protection Ordinance. Each day the violation continues shall be considered a separate offense.

B. Whenever the city finds that a person has violated or is violating a requirement of the section, the city may:

- (1) Issue a written notice of violation;
- (2) File a citation in municipal court as set forth in Section 1-3 SFCC 1987;
- (3) Commence a civil action in district court for appropriate relief, including injunctive relief;

(4) Determine that the violation is a threat to public health, safety, and welfare and is therefore declared a nuisance, and as such may be abated as set forth elsewhere in this Code.

C. A notice of violation shall state with reasonable specificity the nature of the violation and set forth a deadline for correction of the violation pursuant to the requirements set forth in the notice. The notice shall further advise that, should the violator fail to correct the violation pursuant to the requirements, the city will take any and all measures necessary to abate the violation and and/or restore the property and the expense thereof shall be charged to the violator pursuant to subsection 25-6.12 SFCC 1987.

(Ord. #2005-4, §11)

25-6.11 Abatement by City.

B. The city of Santa Fe is a charter municipality, empowered to make and enforce all laws concerning municipal affairs, subject to limitations of the city charter and the constitution and laws of the state of New Mexico. A reasonable exercise of municipal authority includes planning for the operation and growth of the municipal water utility, and planning for orderly urban development. Such planning includes the regulation of the amount and types of uses of water from the city's system to ensure that a reliable source of water exists to meet water requirements of the existing customers and that additional supplies of water in the system are provided for and allocated in a manner consistent with priorities established by the governing body.
(Ord. #2006-28, §2)

25-7.2 Legislative Findings, Purpose and Intent.

A. The city has limited water supplies. Much of the city's water supply is dependent on annual precipitation, and in times of shortage or drought, this dependence can create significant variability in the seasonal and annual water supply available to the city and its water customers.

B. The governing body recognizes, as set forth in subsection 14-8.13 SFCC 1987, Annual Water Budget, that it needs to aggressively pursue available avenues for increasing the city's water supply. These include, but are not limited to the:

(1) Construction of a direct diversion from the Rio Grande to make use of the city's rights to water under that certain lease agreement with the bureau of reclamation for waters from the San Juan diversion project;

(2) Increase in conservation efforts, including the mandating of water catchments, cisterns, drip irrigation and other water saving strategies;

(3) Purchase of additional water and or water rights;

(4) Use of "return flow credits" (if, and/or when available);

(5) Adoption of individual water customer budgets for all existing and new customers;

(6) Rehabilitation and improvement of existing infrastructure and building new infrastructure for water delivery and effluent distribution;

(7) Adoption and implementation of regulations for the use of "gray water"; and

(8) Maintenance of existing infrastructure and resources to maximize their potential.

C. Through the efforts of city staff in conducting a utility demand analysis, there exists the need to obtain and prioritize water rights that augment the city's current water rights.

D. The governing body also recognizes that it is in the best interest of the health, safety and welfare of all citizens of Santa Fe that the city immediately takes the steps necessary to adopt water management policies that conserve and plan for enhancements to its supply and storage of water.

(Ord. #2006-28, §3)

25-7.3 Water Rights Acquisition.

A. The city shall, as a regular part of its annual budgetary process, allocate a percentage of all revenues received from the delivery of water services to the purchase, acquisition, long-term leasing of

B. The governing body shall review for approval projects that are to be funded with voluntary river conservation funds.

C. The city shall make public on at least an annual basis regular reports of all funds allocated and all purchases, acquisition, leases of water rights made and proposed, ongoing and completed projects resulting from the use of the voluntary river conservation fund.

D. Subject to the Bateman Act, the city shall appropriate sufficient funding that matches (on a dollar for dollar basis) on an annual basis all money that is contributed by the public to the voluntary river conservation fund.

(Ord. # 2006-28, §7; Ord. No. 2013-9)

25-9 CITY WATER BUDGET.

Editor's Note: This section is effective January 1, 2010.

25-9.1 Short Title.

Section 25-9 SFCC 1987 shall be referred to as the City Water Budget Ordinance. (Ord. #2009-38, §11)

25-9.2 Authority.

A. This Section 25-9 SFCC 1987 and related Sections 25-10, 25-11 and 25-12 SFCC 1987 are enacted pursuant to the express statutory authority conferred upon municipalities to enact ordinances pursuant to its police power (NMSA §3-17-1 B (1978)) and the power of municipalities to acquire and hold water rights in order to plan for reasonable development pursuant to NMSA §72-1-9 (2006).

B. Such articles are also adopted pursuant to the city of Santa Fe's powers under its municipal charter, adopted effective March 15, 1998, as amended effective May 5, 2008, pursuant to the Municipal Charter Act, sections 3-15-1 to 3-15-16 NMSA 1978, and Article 10, §6 of the Constitution of New Mexico.

C. A reasonable exercise of municipal authority includes planning for the operation and growth of the municipal water utility, and planning for orderly urban development in furtherance of the public health, safety and welfare. Such planning includes the regulation of the amount and types of uses of water from the city's system to ensure that a reliable source of water exists to meet water requirements of the existing customers and that any additional supplies of water in the system are allocated in a manner consistent with priorities established by the governing body.

(Ord. #2009-38, §12)

25-9.3 Legislative Findings.

A. The city has the responsibility to consider the nature of its water supplies. Some of the city's water supplies are dependent on annual precipitation, and in times of shortage or drought, this dependence may create significant variability in the seasonal and annual water supply. The city's groundwater supplies are reliable if not overused.

B. The governing body recognizes that it is in the best interest of the health, safety and welfare of all citizens of Santa Fe that the city take the steps necessary to accurately determine the level of demand on the

(4) Wet water available that year;

B. The total water demand including:

(1) Actual demands upon the city's water service itemized into amounts to serve current customers, city uses, line loss and other actual current demands;

(2) Utility reserve;

(3) Anticipated demands upon the city's water service from future customers with valid written agreements that will require water service within the twelve (12) month period;

(4) Special contractual demands (e.g. Las Campanas, county of Santa Fe); and

(5) Non-revenue water demands including total system losses set out by categories of loss;

C. Water system annual operating plan estimating water production from the city's various supplies to meet projected annual demand;

D. Water resource annual management plan describing the impacts on the city's water resources resulting from the annual operating plan, as well as any planned actions to mitigate those impacts;

E. Twenty (20)-year supply-demand projection, including near- and long-term anticipated demands upon the city's water service based on current growth projections and anticipated demands of future customers with valid written agreements;

F. The quantity of water, if any, by which the sustainable water supply exceeds committed demand;

G. Status of the city's water conservation credit and water rights transfer programs; and

H. Quantification of all water credits held in the city water bank, pursuant to Section 25-10 SFCC 1987, including water rights belonging to the city resulting from water rights purchases and leases, water conservation credits pursuant to Section 25-11 SFCC 1987, water held for affordable housing, and water held to meet the anticipated long-range surface water supply gap resulting from water right permit offset requirements. (Ord. # 2009-38, §15; Ord. No. 2013-8)

25-9.6 Allocation of City's Available Water.

A. Upon review of the annual water budget, the governing body shall determine if water is available for allocation. Water available for allocation shall be derived only from the following sources:

(1) The portion of surplus sustainable water supply in excess of committed demand that the governing body has transferred to the city water bank;

(2) City's water rights purchases and leases deposited in the city water bank;

(3) Retrofit rebate conservation credits deposited in the city water bank under the water conservation credit program set forth in Article 25-11 SFCC 1987;

(4) Conservation credits donated to the city rebates under the water conservation credit program set forth in Section 25-11 SFCC 1987; and

that may be approved shall be determined by the appropriate development, permit or meter application review process.

(2) Is issued for specific developments, building permits or water hook-ups and specific geographic sites and they shall not be moved, sold, traded, transferred or exchanged in any way for different developments, building permits or water hookups.

(3) If not dedicated to an approved development plan or building permit within two (2) years of the allocation approval, or by some other date approved by the governing body, shall revert back the city's credit in the water bank. An applicant may reapply for the previously allocated water credits when the previously designated development project is ready to proceed to the appropriate stage in the development permitting process. An applicant may relinquish allocated water credits at any time and the water credits shall revert back the city's credit held in the city's water bank.

(Ord. #2009-38, §16)

25-10 CITY WATER BANK.

Editor's Note: This section is effective January 1, 2010.

25-10.1 Short Title.

Section 25-10 SFCC 1987 shall be referred to as the City Water Bank Ordinance. (Ord. #2009-38, §18)

25-10.2 Purpose; Creation of City Water Bank.

A. The purpose of the City Water Bank Ordinance is to establish a city water bank consisting of various accounts holding water rights, water credits and water conservation credits.

B. In the city's account shall be placed consumptive use water rights purchased by the city or leased by the city, water conservation credits obtained by the city under the water conservation credit program pursuant to Section 25-11 SFCC 1987, and consumptive use water rights obtained through infrastructure projects allowing reuse of water or return flow credits.

C. In separate accounts in the name of the person or entity transferring water to the city shall be placed consumptive use water rights transferred to the city pursuant to Section 25-12 SFCC 1987 the water rights transfer program and office of the state engineer policies, guidelines and procedures, and water conservation credits transferred to the bank by customers pursuant to Section 25-11 SFCC 1987.

(Ord. #2009-38, §19)

25-10.3 Water Bank Transactions.

A. Consumptive use water rights, water credits and water conservation credits may be transferred to the city water bank by any of the following entities:

(1) The city to hold consumptive use water rights derived from water rights purchases, leases and water conservation credits obtained from retrofit rebates and from donation from customers signing conservation contracts; and infrastructure projects allowing reuse of water and return flow credits;

Section 25-11 SFCC 1987 shall be referred to as the Water Conservation Credit Program Ordinance. (Ord. #2009-38, §23)

25-11.2 Purpose.

The purpose of the city water conservation program is to increase system-wide water conservation, to facilitate offsetting impacts on the city's water supply system from new development and to supply water for other municipal uses. (Ord. #2009-38, §24)

25-11.3 Water Conservation Credits.

A. A water conservation credit represents a fixed quantity of water expressed in acre feet per year (AFY) that is transferable within the city of Santa Fe for annual usage.

B. Upon the request of a water customer, the city may schedule and conduct an on-site water conservation audit to determine ways that the customer may reduce water usage and provide an estimate of the quantity of water that can be conserved.

C. Water conservation credits may be created through either of the following two (2) methods:

(1) *Water Conservation Contract.* Water customers with a minimum current uninterrupted five (5) year history of water usage and water customers subject to an alternative development water budget may agree to a water conservation contract with the city water division to reduce the customer's annual water usage at a property the customer owns from the past five (5) year average or from the amount permitted under the alternative development water budget by a fixed quantity in AFY, with a minimum reduction of two one-hundredths (.02) of an AFY or six thousand five hundred seventeen (6,517) gallons per year. Conservation measures shall be shown to consist of: for commercial customers, a change in the nature of the business, a change in commercial process, retrofit of older commercial appliances or fixtures with newer, more water-efficient units, or installation of new water conservation technology; and for residential customers, retrofit of older appliances or fixtures with newer, more water-efficient units or installation of new water conservation technology. Changes from residential uses to commercial uses shall not be eligible for a water conservation contract.

(a) Upon execution of the contract, the city's water division shall:

(i) Track that customer's usage annually to ensure that the promised water conservation savings are achieved and maintained; and

(ii) Issue to the customer, water conservation credits reflecting the volume of city-transferable water that the customer has committed to conserve.

(b) These credits shall be deposited in the city water bank in the customer's name.

(2) *Water Conservation Retrofit Rebate.* The city may obtain water conservation credits through direct payment to residential and commercial customers of a rebate upon the customers' replacement (retrofit) of a high-water-usage appliance, fixture or landscaping with a qualifying water-saving appliance, fixture or landscaping, including a rebate for the installation of rain barrels, or through the city's direct installation of water saving devices provided that the following are met:

25-12.1 Short Title.

Section 25-12 SFCC 1987 shall be referred to as the Water Rights Transfer Ordinance. (Ord. #2009-38, §29)

25-12.2 Purpose.

The purpose of the city's water rights transfer program is to administer water right transfers designated for development projects as required by Section 14-8.13 SFCC 1987 and water rights transfers designated for the city water bank as provided for in Section 25-10 SFCC 1987. (Ord. #2009-38, §30)

25-12.3 Designating Water Right Transfers.

A. The applicant shall notify the city, in writing, at the time of the initial tender of water rights for city review and possible acceptance, whether the water rights are to be dedicated to a development water budget or whether the water right is designated for the city water bank. At any time after their tender, water rights initially designated for the water bank can be dedicated to a development by written notification provided by the applicant to the city.

B. Section 25-12 SFCC 1987 shall not apply to development for which an annexation agreement has been approved by the governing body prior to July 27, 2005, which specifically addresses water demand offset and the transfer of water rights to meet such water demand.
(Ord. #2009-38, §31)

25-12.4 Tender of Water Rights.

A. Water rights proposed to be transferred to the city's water system for dedication to a development shall be tendered to the city attorney at whichever review stage is applicable and occurs first in the review of a particular development, according to the following requirements:

(1) Not later than sixty (60) days after the final approval by the land use department, the planning commission or the governing body of the final subdivision plat, except for parcels within a commercial subdivision for which actual use with attendant water budget has yet to be determined;

(2) Not later than sixty (60) days after the final land use approval of the final development plan by the land use department, the planning commission or the governing body; or

(3) For developments located outside the city limits, prior to execution of an agreement with the city to construct and dedicate water lines.

B. In the case of phased development, water rights tendered for the first development phase shall adhere to subsection 25-12.4(A) SFCC 1987 above, and water rights for a subsequent phase of the development shall be tendered to the city attorney at the time that the infrastructure financial guarantee is posted for that phase of development.

C. Water rights designated for the city's water bank may be tendered at any time.

D. The information contained in the tender shall include:

the reason for unacceptability. Upon notice to the applicant that any or all of the water rights may be cured, a new review period shall commence, and the applicant shall within the new review period provide a cure as specified by the city in its written notice. If the city rejects the water rights, the applicant may tender other water rights for transfer. Upon such tender, a new review period shall commence for the city. This process may be repeated until the city accepts tender of all water rights required by the city.

E. Applicant shall reimburse the city for its hydrologic due diligence review of the tendered water rights by paying the actual costs as evidenced by invoices from consultants prior to the city's final written acceptance of water rights into the water rights transfer program.

(Ord. #2009-38, §33)

25-12.6 Acceptance of Water Right into the City Water Right Transfer Program.

Upon payment of the fees due from the applicant for the city's due diligence review and determination that tendered water rights are acceptable to the city, the city shall issue to the applicant the final written acceptance of the water rights into the water rights transfer program, specifying the total amount of consumptive use in acre-feet per year that the city has approved. (Ord. #2009-38, §34)

25-12.7 Water Right Transfer Application Procedure and Payment of Fees and Costs.

A. After city acceptance of water rights into the water rights transfer program, the applicant shall prepare a draft application to the office of the state engineer to transfer the water rights to the city's designated point of diversion. The draft application shall show the city as a co-applicant. The draft application shall include no less than the total number of consumptive use acre-feet accepted by the city. The applicant shall publish all necessary legal notices in appropriate newspapers.

B. The content of the water rights transfer application shall be determined by the applicant and the city and completed in a manner acceptable to the office of the state engineer. The final water rights transfer application shall be executed by the seller, if applicable, the applicant, and the city. Following the execution and submittal of the transfer application to the office of the state engineer by the applicant, the applicant shall not file any subsequent office of the state engineer application with regard to those water rights without the written consent of the city.

C. The city and the applicant shall reach mutual agreement regarding the application. The city shall have the discretion to modify or withdraw the application and to discontinue the transfer process if proceeding threatens exercise of the city's water rights under Permit No. RG-20516 *et al.* The applicant may also withdraw the application, provided the applicant notifies the city in writing one week in advance of any such withdrawal.

D. The applicant shall pay applications fees required by the office of the state engineer and legal notice publication fees and costs incurred in any administrative hearing as well as subsequent appeals, if pursued. The city shall receive notice of any hearings and may participate in the hearings as it deems appropriate. The city has ultimate decision-making authority regarding any conditions of approval that any protestant or the office of the state engineer may offer that affect the city's existing permit, RG-20516 *et al.* The applicant has ultimate decision-making authority regarding any conditions of approval that any protestant or the office of the state engineer might offer that affect the validity and extent of the water rights being transferred.

(Ord. #2009-38, §35)

25-12.8 Financial Guarantee Procedure for Issuance of a Building Permit Prior to Completion of Water Rights Transfer and Conveyance.

25-12.9 Office of State Engineer's Approval of the Water Right Transfer, Appeals, and Conveyance of Water Rights Title to City.

A. A water right transfer shall be deemed complete once the office of the state engineer has approved a transfer of all or a portion of the water right to the new point of diversion(s) and the new place and purpose of use and has issued a final permit for the transfer that is not appealed, or the permit is appealed but the permit becomes a non-appealable, final order by the office of the state engineer.

B. The city, as the lead applicant, shall have final decision-making authority regarding appealing any conditions of approval that affect Permit No. RG-20516 *et al.* unless the applicant or the city chooses to withdraw the application and can do so in such a way that there will be no effect from the application process on Permit No. RG-20516 *et al.* The applicant shall have final decision-making authority regarding appealing any decisions affecting the validity and extent of the water rights being transferred. The party that decides to appeal shall pay the cost of the appeal.

C. If the application is denied and is not appealed, then a new tender period shall commence for the applicant.

D. When water rights are dedicated to a specific development water budget under subsection 25-12.3(A), upon completion of the water right transfer, the applicant shall within ninety (90) days, convey to the city all right, title and interest to the transferred water rights, at no additional cost, free and clear of all encumbrances and with special warranty covenants. Within this same ninety (90) day period, the applicant shall execute and file all appropriate documentation with the Santa Fe county clerk and with the office of the state engineer in order to effectuate timely issuance of the office of the state engineer final permit, pursuant to NMSA 1978, § 72-1-2.1. If the applicant fails to do so, the city shall disallow use of water from the city's system for the applicant's development unless the applicant has provided a letter of credit or escrow funds as set forth in subsection 25-12.8 SFCC 1987 in which case the letter of credit or the escrow funds shall be retained by the city. The applicant shall reimburse the city for all water rights transfer application transaction costs borne under subsection 25-12.6 SFCC 1987. Unpaid transaction costs shall be treated as utility charges as set forth in subsections 15-1.4 and 15-1.5 SFCC 1987.

E. When water rights have not been designated for a specific development water budget, upon completion of the water right transfer, the water rights shall be held as undesignated water rights in the water bank in the applicant's name. At such time as the water rights are designated for a specific development water budget, the applicant shall convey legal title to the city and file an appropriate change of ownership with the OSE and the Santa Fe County Clerk as required in paragraph D above.
(Ord. #2009-38, §37)

25-12.10 Issuance of City of Santa Fe Water Rights Transfer Certificate.

Upon completion of the transfer of the water rights to the city's permit as set forth in subsection 25-12.9 SPCC 1987 and issuance of the office of the state engineer's final permit, the water division shall deposit the water rights in the city water bank in the applicant's name and issue to the applicant a water rights transfer certificate evidencing the deposit. If the water rights were tendered for application to a specific development under subsection 25-12.3A, that shall be indicated on the water rights transfer certificate and the water bank's records. Upon issuance of the water division's water rights transfer certificate, the water rights transfer applicant shall then be referred to as the water rights transferor. (Ord. #2009-38, §38)

25-12.11 Water Rights Dedication to Obtain a Building Permit.

B. The Santa Fe river is an important element of the city of Santa Fe and the city's origin was due to the existence of the river.

C. There is widespread community support for maintaining a living Santa Fe river for recreational and cultural purposes.

D. A healthy river provides riparian habitat for wildlife and minimizes erosion and flood damage, removes pollutants from storm water and helps recharge groundwater.

E. The city has put to beneficial use its water right under Declaration No. 01278 and License 1677, (as issued by the state engineer) and intends to continue to put that water to beneficial use, and the adoption of this ordinance will not adversely affect the city's water right under Declaration No. 01278 and License 1677.

F. Implementation of this ordinance will not cause the city to operate the municipal water utility in any way that is inconsistent with any local, state or federal rules, regulations or laws.
(Ord. #2012-10, §3)

25-13.3 Purpose.

The purpose of Section 25-13 SFCC 1987 is to formalize the city's commitment to provide for a target flow within the Santa Fe River in order to enhance and further the objective of restoring the Santa Fe river as a living river by committing to use up to one thousand (1,000) acre-feet per year (AFY) of the city's water supply, depending upon hydrologic conditions in the Santa Fe River watershed. This section shall be interpreted to further this objective. (Ord. #2012-10, §4)

25-13.4 Definitions.

As used in Section 25-13 SFCC 1987:

Administrative procedures means the Administrative Procedures for the Santa Fe River Target Flows Ordinance, adopted by resolution of the governing body, that describe how city staff will implement Section 25-13 SFCC 1987 in order to provide up to one thousand (1,000) AFY in target flows to the Santa Fe river. The administrative procedures shall include the following:

A. The operations of the city's water division and other city staff necessary to provide for the up to one thousand (1,000) acre-feet target flow below Nichols reservoir;

B. Target flow hydrographs that support the city's identified ecological and social outcomes;

C. Adjustments to the target flows and target hydrograph under less than average anticipated watershed yield;

D. Provisions to adaptively manage the target flows based on ecological and social outcomes because of precipitation events, stream flows and effects;

E. Adjustments to the target flow due to emergencies;

F. Requirements for monitoring, accounting, and reporting target flow; and

25-13.6 Coordination with Santa Fe River Community Events.

When possible, target flows and target hydrographs shall be patterned to support community events scheduled along the Santa Fe river. (Ord. #2012-10, §7)

25-13.7 Water Emergency Target Flow Adjustment.

A. Pursuant to subsection 25-5.6 SFCC 1987, upon declaration of a water emergency, the city manager is authorized to adjust target flows to the Santa Fe river.

(1) For the "Water Warning — Orange" implementation stage, target flows to the Santa Fe river may be suspended.

(2) For the "Water Emergency — Red" implementation stage, target flows to the Santa Fe river shall be suspended.

B. The administrative procedures provide the detailed process for adjusting target flows to the Santa Fe river during a declared water emergency.
(Ord. #2012-10, §8)

25-13.8 Reporting and Review.

Annually city staff shall provide a report to the governing body summarizing the previous year's target flows and projection for the next year's target flows. The annual report shall provide the governing body the opportunity to review this section. Additional information regarding accounting and reporting is provided for in the administrative procedures. (Ord. #2012-10, §9)

25-13.9 Effective Date.

This section shall become effective five (5) days after publication of adoption. (Ord. #2012-10, §10)

EXHIBIT A RULES AND REGULATIONS -- WATER SERVICE

**CITY OF SANTA FE
PUBLIC UTILITIES DEPARTMENT
WATER SERVICES DIVISION
EXHIBIT A
(Subsection 25-4.1)**

**RULES AND REGULATIONS -- WATER SERVICE
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Title of Rule	Rule No.
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- A. CITY - The water utility owned and operated by or on behalf of the city of Santa Fe, New Mexico, called the Sangre de Cristo Water Division and whose business office is at 801 West San Mateo, Santa Fe, New Mexico. Also known as the Santa Fe Municipal Water System.
- B. CHRONICALLY DELINQUENT - The status of a customer who during the prior twelve (12) months has been disconnected by the City for nonpayment, or who during the prior twelve (12) months has not paid a bill by the date that a subsequent bill is rendered on three (3) or more occasions.
- C. COMMERCIAL SERVICE OR USE - The provision of or use of water for all types of establishments not otherwise classified as residential.
- D. CROSS-CONNECTION - Any physical connection or arrangement between two (2) otherwise separate piping systems, one of which contains potable water and the other of unknown or questionable safety, whereby water may flow from one system to the other, the direction of the flow depending on the pressure differential between the two (2) systems.
- E. CUSTOMER - Any person, firm, association, partnership or corporation, or any agency of the federal, state, or local government, being supplied with, and/or responsible for payment for, water services by City.
- F. DELINQUENT - The status of a bill rendered to a customer for utility service which remains unpaid 15 calendar days following the "due" date on the customer's utility bill.
- G. DISCONTINUANCE OF SERVICE - An intentional cessation of service by the City which was not requested by a customer.
- H. ESTIMATED BILL - A bill for utility service which is not based on an actual reading of the customer's meter, or other measuring device, for the period billed.
- I. GOVERNING BODY - The Mayor and City Council of the city of Santa Fe as defined in subsection 2-1.1 SFCC 1987.
- J. POINT OF DELIVERY - The point of delivery shall be the point where the facilities of the City connect to the facilities furnished by the customer.
- K. PRESSURE - The range of fifty (50) to one hundred twenty-five (125) pounds which can ordinarily be made available in the area contiguous to existing lines.
- L. PRESSURE REGULATING DEVICE - A device that maintains a constant water pressure at its immediate downstream side which is less than the inlet pressure to the device, unless the pressure on the inlet side is lower than the pressure setting for the downstream side.
- M. Reserved.
- N. RATE SCHEDULE - A description of the charges, conditions of services and other similar information associated with the provision of water service to a given class or type of customer.
- O. RECONNECTION CHARGE - A charge made by the City at the time application is made for reconnection of water service at a place where water service has been previously disconnected.
- P. Reserved.

Single family residential service shall apply where a single water meter serves only on dwelling unit for normal domestic water use. A dwelling unit is defined in subsection 25-1.1 SFCC 1987. The meter may also serve uses commonly associated with the dwelling unit such as home occupations, as set forth in Chapter 14 SFCC 1987 and licensed by the city, swimming pools, and spas and landscaping.

E. MULTI-FAMILY RESIDENTIAL SERVICE.

Multi-Family Residential service shall apply where a single water meter serves more than one dwelling unit for normal domestic water. A dwelling unit is defined in subsection 25-1.1 SFCC 1987. The meter may also serve uses commonly associated with multiple dwelling units such as home occupations, as set forth in Chapter 14 SFCC 1987 and licensed by the city, swimming pools, spas, landscaping and common rooms etc. provided that their use is limited to the residents and their guests and are not open to the general public or to memberships for persons not residing there. Golf courses are not considered a use commonly associated with multiple dwelling units.

F. COMMERCIAL SERVICE.

Commercial water service shall apply where the water meter(s) serves a use not classified as single family residential or multi-family residential service set forth above. Commercial water service shall also apply where the water meter(s) serves a combination of residential and commercial services.

(Ord. # 2005-2, §6)

4. APPLICATION FOR SERVICE

- A. Applications for water service shall be made at the City business office, in person or by telephone. Applications shall be in a form prescribed by the City and shall include those customer requirements listed in Rule 10 B. The City shall have a reasonable time to provide water service, once the application has been accepted. Written contracts are required for all classes of service other than service to residential customers or commercial customers accepting service under the applicable Rate Schedule if no extension of facilities is required. Extensions of facilities made in accordance with Rule 19 or under Rate Schedule No. 9, Utility Expansion Charge, will require a written contract prior to the provision of service.
- B. A reconnection fee shall be paid by an applicant for transfer of existing service or for service which has been previously disconnected by the City from any system operated by the City. In addition to the reconnection fee, the applicant shall pay all delinquent fees and charges owed to the City.
- C. The conditions of piping and character of installation on the premises shall be subject to inspection by the City and be approved by the appropriate governmental inspection agency, and if such piping and/or installation is found to be faulty, the City may refuse to provide service until, and after, such faulty installation has been corrected to the satisfaction of such appropriate governmental agency or the City. The City does not, however, assume the responsibility for such inspections and shall not be held liable for failure of such piping or installations.
- D. The City reserves the right to limit each lot to a maximum daily average usage.
- E. To enable the City to provide adequate service facilities, the customer shall be required to provide load information on new construction or alterations sufficiently in advance of the date

- F. Where the normal water pressure is determined by the customer to be less than his/her requirements, the customer shall install a booster pump and pressure storage tank. The design for any such installation, including an approved backflow preventer, shall be submitted to the City for approval, such approval shall be received prior to any construction.
- G. Where the normal water pressure is determined by the customer to be greater than his/her requirements, the customer shall install an adjustable pressure regulating device in his/her piping system approved by all appropriate governmental agencies.
- H. An adjustable pressure regulator approved by all appropriate governmental agencies shall be installed by the customer on all new services before water service will be connected and it shall be so located as to control the pressure in the customer's entire piping system.
- I. All piping and plumbing installations made by the customer or under responsibility of the customer shall conform with applicable City codes or regulations.
- J. All 3/4", 1", 1-1 1/2", and 2" services installed by the City shall be subject to the applicable base meter service charge as detailed in Rate Schedule 7.
- K. Meters shall comply with Rule 18, Exhibit A of Chapter 25 SFCC 1987.
- L. Use of the City's curb or meter shut-off valve by customer or customer's agent is prohibited. (Ord. # 2003-25, §51; Ord. # 2005-2, §7)

9. DISCONTINUANCE AND DENYING RESTORATION OF SERVICE

- A. The City shall not discontinue service for those situations described in subsection 15-1.7C SFCC 1987.
- B. Discontinuance of service for delinquent accounts or for failure to comply with payment arrangements, as set forth in paragraph D.4 below, shall occur only between the hours of 8:00 a.m. to 3:00 p.m., Monday through Thursday and shall not occur less than twenty-four (24) hours prior to a holiday or weekend unless the City's designated business office is open for receipt of payment and City personnel are available to restore such service upon payment. All other discontinuance of service may occur as necessary.
- C. Any customer whose service is discontinued under the provisions of this section shall be required to pay a reconnection fee in addition to all other applicable fees and charges before being reconnected. All reconnections shall be made in accordance with the reconnection provisions in this chapter.
- D. The City may discontinue service when the following occurs:
 - 1. Without prior notice:
 - a. A condition is determined by the City to be hazardous.
 - b. A customer tampers with, damages or destroys the equipment furnished and owned by the City.
 - c. There is unauthorized use of service or connection to service provided by the City.

- f. A form for demonstrating how the residential customer with a serious illness or life endangering situation has inadequate financial resources to correct the condition causing discontinuance of service.
2. All ten (10) day notices shall also include the following:
 - a. The amount owed and the date by which the customer must pay the amount due or enter into a payment arrangement with the City if the customer has not already entered into one. The consumption period over which said amount was incurred, the date, and the amount of the last payment shall be available on request.
 - b. A statement that if the customer pays that portion of the bill which is not in a bona fide dispute, the customer may appeal the portion of the bill which the customer does dispute as set forth in subsection 15-1.8 SFCC 1987.
 - c. The title(s), address, telephone number(s) and working hours of the designated City staff responsible for carrying out the rights described in this section.
 3. Notices shall be deemed effective as follows:
 - a. Twenty-four (24) and three (3) day notices shall be hand delivered to the service address and shall be deemed effective immediately upon delivery.
 - b. Ten (10) day notices shall be mailed to the customer's billing address and shall be deemed effective three (3) days from the date of the letter.
 - F. A properly executed medical certificate form shall be adequate to delay discontinuance of water service, as set forth in paragraphs D.2, D.3 or D.4 above, for at least thirty (30) days and, at the City's option, the City may delay discontinuance for up to one hundred twenty (120) days or for a longer period of time. The City shall promptly notify the residential customer in writing as to how long it deems the certificate to be valid; provided, however, that should the circumstances on which the certificate is based appear to have changed, the City may require additional certification. If service has been discontinued, the City shall reestablish service within twelve (12) hours of receipt of the medical certificate.
 - G. The city employee personally contacting a customer two (2) days prior to discontinuance, as set forth in paragraph D.3c. above, or the City employee sent to discontinue utility services, as set forth in paragraphs D.2, D.3 or D.4 above, shall note any information which is made known to the employee by the customer regarding any resident's seriously ill or life endangering health condition, such as whether a resident is physically disabled, frail or elderly. Such information shall be immediately reported in writing to the City employee authorized to prevent discontinuance. That employee shall either delay the discontinuance order if it is apparent that a properly executed medical certificate will be received, or shall state in writing why such delay is not being affected. The City and City employee's noting of the information made known by the customer, and acting upon such information or failing to act on such information in good faith, shall cause the City and City employee to be held harmless for any error made or damages incurred.
 - H. If a residential customer has arranged with the City to participate in a third party notification program, as set forth in subsection 15-1.7B SFCC 1987, the City shall not discontinue service to the customer for delinquent accounts or failure to comply with payment arrangements without:

11. INTERRUPTION OF SERVICE

- A. The City reserves the right to interrupt service for a reasonable period for maintenance and repairs to its property or equipment.
- B. The City will strive to furnish adequate, efficient and reasonable service. Interruption of service should be reported promptly by the customer to the City. The City will endeavor to restore service within a reasonable time.
- C. The City will use reasonable diligence to furnish a regular and uninterrupted supply of water; however, interruptions or partial interruptions may occur or service may be curtailed or fail as a result of circumstances beyond the control of the City, including but not limited to those caused by public enemies, accidents, strikes, legal processes, damages to transmission or distribution facilities of the City, repairs or changes in the City's transmission or distribution facilities. The City will endeavor to give reasonable notice in advance of any planned shutoff.
- D. Customers whose service requirements exceed those normally provided should advise the City and contract for additional facilities as may be required. The City will not, under any circumstances, contract to provide one hundred percent (100%) reliability.
(Ord. #2003-25, §53)

12. RESERVED*

13. ACCEPTABLE STANDARDS

The City will adhere to the applicable state minimum design and construction standards as established under state law.

14. RESERVED**

15. UNAUTHORIZED CONNECTIONS

Domestic water service furnished by the City to any customer shall be used only in connection with such customer's residence, dwelling, or building to which the City's water service is piped. No additional facilities or supplies shall be connected to the existing service nor shall service be piped from one residence, dwelling, or building to another residence, dwelling or building without first obtaining a written permit, authorization and/or statement of requirements from the City, and without first complying with any such requirements.

16. STOPPAGE OR OBSTRUCTIONS OF SERVICE

The City shall not be responsible for the stoppage or obstruction or breaks in facilities or lines of the customer.

17. TEMPORARY AND SPECIAL SERVICES

- A. Where service connections are available, temporary service will be furnished under the City's established rules, regulations, and rates for the type of service required; provided, however,

B. SEPARATE METERS REQUIRED – BUILDING PERMIT APPLICATIONS.

The following building applications submitted to the City after March 11, 2005 shall comply with paragraph A above.

1. Additions or remodeling of existing structures that disturb greater than 1000 square feet of land area, or have a valuation over \$80,000.
2. A dwelling unit as defined in subsection 25-1.1 SFCC 1987.
3. New tenant improvements within an existing shell building.

C. OWNERSHIP OF METERS.

All meters used in connection with metered service shall be furnished, installed, maintained, and owned by the City.

D. LOCATION OF METERS.

1. The City shall specify the meter location and point of delivery to any premises, at the curb, property line or alley, and the City shall be contacted for exact information locating the point of delivery before any piping of customer's system has been started. If such information is not obtained by customer in writing, expensive changes in piping installation may result for which the City shall not be held liable in any way and will not assume any responsibility.
2. When a building or property includes more than one unit requiring separate meters, all of the meters shall be grouped adjacent to each other and shall be individually numbered and identified according to the units served.
3. In order to provide service from the nearest water main installed in public right-of-way, a customer's meter and the water line connecting the meter to a structure will be relocated when a water main is installed in a public right-of-way which abuts customer's property. This will only be required when the project is undertaken to improve the customer's water service and to eliminate water mains on private easements wherever possible.

E. UNAUTHORIZED SETTING OR MOVING OF METERS.

No person shall set or move a water meter without first obtaining written permission from the water division and complying with any requirements of the City.

F. METER SIZE.

The size of the water meter shall be as determined by the city water division based upon the nature of the customer classification and the proposed and/or potential use of the property. (Ord. # 2006-53, §36; Ord. #2010-5, §1; Ord. #2010-30, §2)

19. LINE EXTENSION POLICY

- A. Whenever an extension of City's water lines is required to serve an applicant, or group of applicants, extension will be made under the following terms and conditions.

Attachment 7 – Amendment to Title 19 Building and Construction Ordinance

ORDINANCE NO. 3307

**AN ORDINANCE AMENDING TITLE 19 OF THE SAN LUIS OBISPO COUNTY CODE,
THE BUILDING AND CONSTRUCTION ORDINANCE, BY AMENDING SECTION
19.07.042 RELATING TO WATER CONSERVATION IN THE PASO ROBLES
GROUNDWATER BASIN AND THE NIPOMO MESA WATER CONSERVATION AREA**

The Board of Supervisors of the County of San Luis Obispo, State of California, ordains as follows:

SECTION 1. Title 19, Chapter 19.07, Section 19.07.042 of the San Luis Obispo County Code, is hereby amended to read as follows:

Chapter 19.07 - Plumbing Code

19.07.042 - Water Conservation Provisions. The requirements in this section shall apply to all new installations and, where specifically required, to existing structures.

(a) **Water fixtures.** Water fixtures shall comply with current requirements of the California Energy Commission and Department of Water Resources.

(b) **Existing structures.** In existing buildings all fixtures, including replacement water fixtures, shall conform to the above requirements.

(c) **Other requirements.**

(1) Spas, hot tubs, fountains and other decorative bodies of water shall be equipped with recirculating systems and shall be designed to operate without a continuous supply of water.

(2) Vehicle wash facilities shall have approved water reclamation systems which provide for reuse of a minimum of 50 percent of the wash water. Hoses, pipes, and faucets for manual application of water to vehicles at such facilities shall be equipped with positive shut-off valves designed to interrupt the flow of water in the absence of operator applied pressure.

(3) Water supply piping shall be installed so that each dwelling unit may be served by a separate water meter.

(d) **Paso Robles Groundwater Basin and Nipomo Mesa Water Conservation Area.** In addition to the requirements in Subsections a, b and c above, the requirements in Subsections d.1 through d.4 shall apply to all new development that uses water from the Paso Robles Groundwater Basin (excluding the Atascadero Sub-basin), and the Nipomo Mesa Water Conservation Area as shown on maps in this Subsection.

(1) **Offset Required.** Prior to issuance of a construction permit for a new structure with plumbing fixtures on property that overlies and/or uses water from the Paso Robles Groundwater Basin, (excluding the Atascadero Sub-basin) or the Nipomo Mesa Water Conservation Area the developer of such new structure shall obtain an Offset Clearance from the Department of Planning and

Attachment 7 – Amendment to Title 19 Building and Construction Ordinance

Building verifying that new water use has been offset at a 1:1 ratio. Water savings must come from the same groundwater basin as the proposed new development. Applicants shall meet offset requirements by complying with Subsection 2 or 3 below.

i. **Applicability:** Construction permits for development approved through discretionary permits in the Paso Robles Groundwater Basin (excluding the Atascadero sub-basin) shall instead comply with the offset ratio required in Section 22.94.025 of the Land Use Ordinance.

ii. **Offset Clearance Process:** Applications for an Offset Clearance shall include evidence that projected water use (based on actual water data or by approved assumptions about the water demand for that use) has been offset at a 1:1 ratio through verifiable evidence or through a County Approved Water Conservation Program. Water savings must come from the same groundwater basin as the proposed new development.

(2) **County Approved Water Conservation Programs.** Applicants shall meet the offset requirement by purchasing credits from a County Approved Water Conservation Program operating in the same groundwater basin as the proposed project or by complying with one of the alternatives in Section 3. Approved programs achieve water savings in existing development and make credits available for purchase. The cost of offset credits is set so as to be equal to the cost of achieving water savings. Programs may include but are not limited to plumbing retrofit programs and turf removal incentive programs.

(3) **Alternatives.** As an alternative to a County Approved Water Conservation Program, or in areas where such a program is not available, applicants for new development may meet the offset requirements for their project through one of the following alternatives.

i. **Applicant-performed plumbing retrofits.** Applicants may meet the water offset requirement for their proposed project by retrofitting existing fixtures in homes within the same groundwater basin as the proposed project. Applicants shall adhere to the following:

A. Retrofit work must be performed and verified by a licensed plumber.

B. The water savings credits that will result from each retrofitted fixture shall be established by resolution for each geographic area. After retrofit work has been completed and verified, applicants shall submit detailed evidence that enough fixtures have been retrofit to offset the water use of the proposed new development.

Attachment 7 – Amendment to Title 19 Building and Construction Ordinance

ii. **Water Conservation Program for Public Facilities.** Applicants may choose to fund a water conservation program for public parks, school grounds, or other public facilities in the same groundwater basin as the proposed project. The program to be funded will have been prepared by a California-licensed landscape architect for the County Parks Department, a school district or another public entity, as applicable. The program shall be reviewed and approved by the owner of the public facility, and shall identify water savings and associated costs of conservation measures such as irrigation system replacement and/or repairs, installation of "smart controllers," removal of turf, replacement of high water using landscape material, and amendments to soils. The water conservation program shall clearly identify the expected water savings from implementation of the program.

iii. **Areas Served by a Community Service District.** In areas served by a Community Service District (CSD), the CSD may certify that equivalent water use has been offset through an approved program or project.

(4) **Termination.** The provisions of this section for the Paso Robles Groundwater Basin (excluding the Atascadero Sub-basin) shall expire upon the effective date of a final and adopted Water Code section 10720 et seq. groundwater sustainability plan(s) by a local groundwater sustainability agency or agencies, covering the entirety of the Paso Robles Groundwater Basin within the land use jurisdiction of the County of San Luis Obispo.

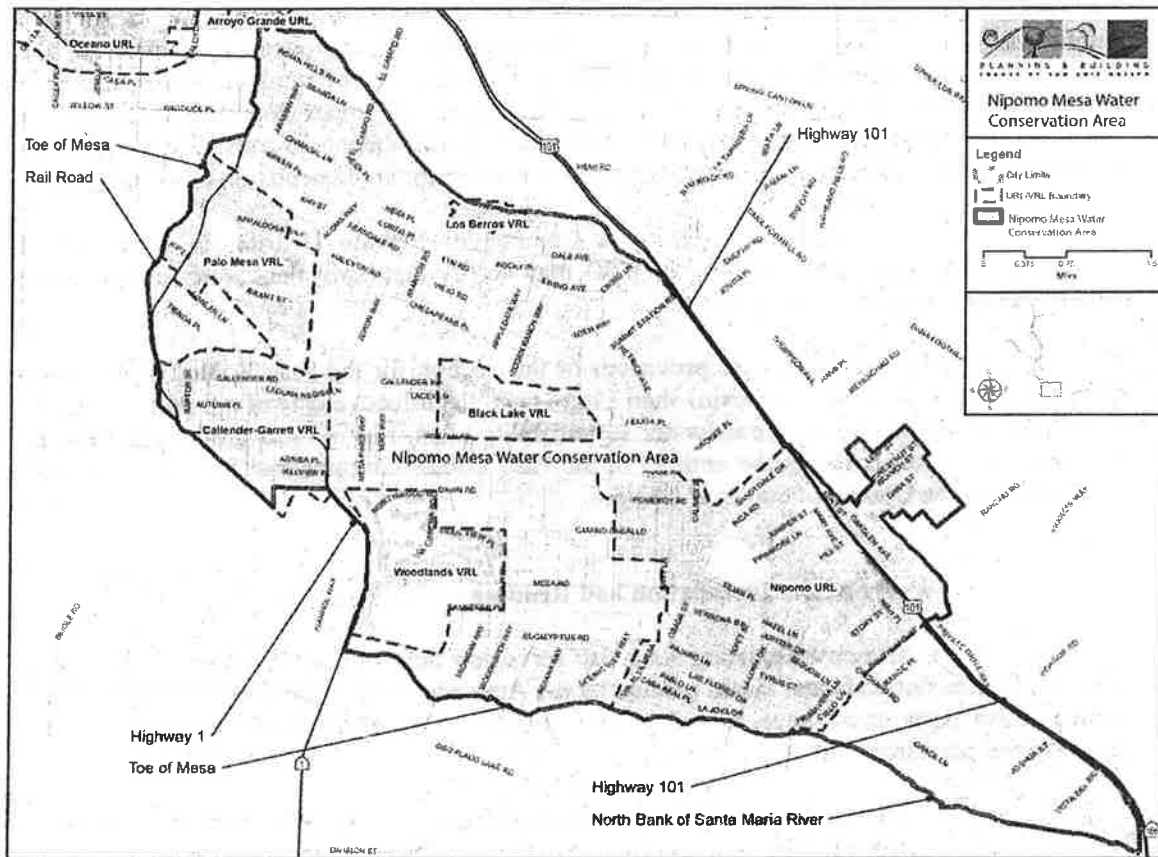
(5) **Water Meter Installation and Reading.**

i. All new or existing wells that serve new development that overlie or use water from the Paso Robles Groundwater Basin (excluding the Atascadero Sub-basin) or the Nipomo Mesa Water Conservation Area must have a well meter installed. The meter shall be used to measure all groundwater used from that well.

ii. Meter installation must be verified by the County Public Works Department prior to building permit issuance. The configuration of the installation shall conform to the Water Well Metering Standards and Installation Guidelines set forth by the Department of Public Works and incorporated into the Public Improvement Standards.

iii. Property owners or responsible party designated by the property owner must read the water meter and record the water usage on or near the first day of the month. These records must be maintained by the property owner or responsible party and may be subject to inspection only by code enforcement pursuant to a violation investigation.

Attachment 7 – Amendment to Title 19 Building and Construction Ordinance



Sources: County of San Luis Obispo Planning and Public Works Department, 2014
Map created September 24, 2014

Figure 7-1 – Nipomo Mesa Water Conservation Area

Attachment 7 – Amendment to Title 19 Building and Construction Ordinance

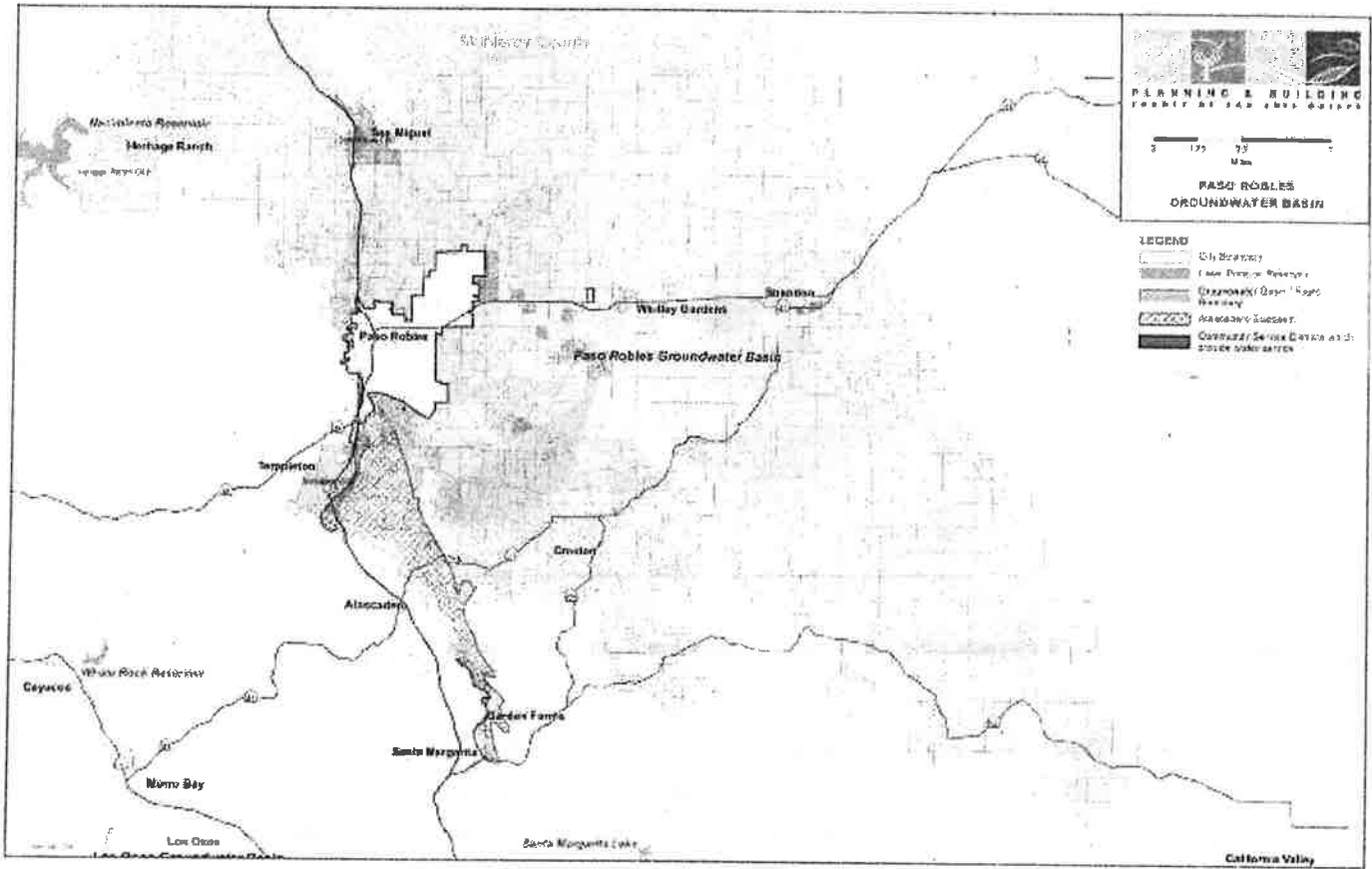


Figure 7-2 – Paso Robles Groundwater Basin Excluding the Atascadero Sub-basin

(e) Los Osos Groundwater Basin. In addition to the requirements in subsections (a), (b) and (c) above, the requirements in subsections (e)(1) through (e)(10) below shall apply to all new development that uses water from the Los Osos groundwater basin shown in Figure 7-3.

Attachment 7 – Amendment to Title 19 Building and Construction Ordinance

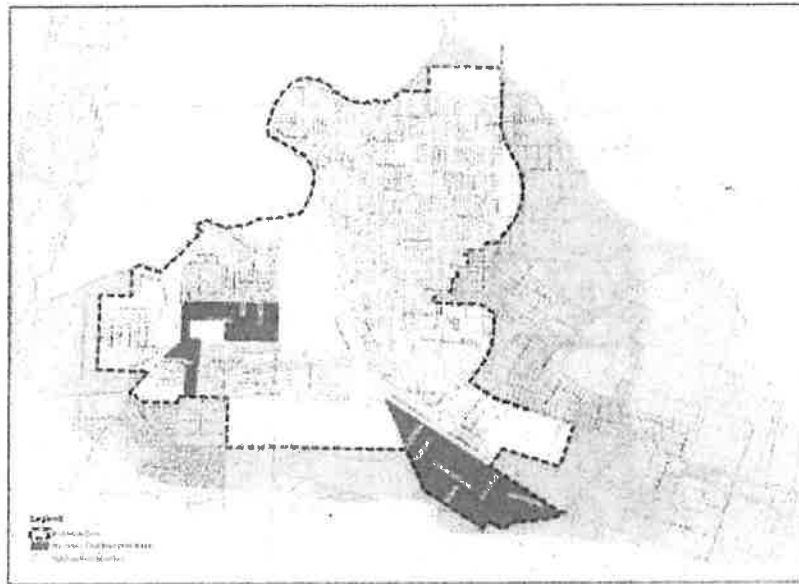


Figure 7-3. Los Osos Groundwater Basin and Prohibition Zone, not to scale

(1) The developer of any new structure that uses water from the Los Osos groundwater basin shall install plumbing fixtures that meet the following requirements:

- i. Toilets rated at no more than 1.28 gallons per flush (HET);
- ii. Showerheads rated at no more than 2.0 gallons per minute;
- iii. Bathroom sink aerators with a volume of no more than one gallon per minute;
- iv. Hot water circulation systems for master bathrooms and kitchens if the furthest plumbing fixture unit in these rooms is greater than twenty pipe-feet from the hot water heater;
- v. Commercial structures shall use urinals rated at no more than 0.5 gallons per flush;
- vi. New residences shall be plumbed for grey-water systems pursuant to Chapter 16 of the Uniform Plumbing Code.

(2) Prior to issuance of a construction permit for a new structure with plumbing fixtures that use water from the Los Osos groundwater basin, the developer of such new structure shall retrofit plumbing fixtures in existing structures within the Los Osos groundwater basin, but outside the Prohibition Zone as shown in figure 7-23. The number and type of plumbing fixtures to be installed shall be as required in the equivalency table as adopted and codified in Appendix A. The equivalency table indicates the point values of existing fixtures which may be retrofitted and the corresponding

Attachment 7 – Amendment to Title 19 Building and Construction Ordinance

point requirements for each newly constructed or remodeled structure. A package of proposed retrofits and water conservation requirements must add up to no less than the minimum requirements established in Appendix A.

(3) Any addition of one hundred twenty square feet or more to an existing structure that uses water from the Los Osos groundwater basin shall require the replacement of plumbing fixtures in the entire structure with the following types of plumbing fixtures:

- i. Toilets rated at no more than 1.28 gallons per flush (HET);
- ii. Showerheads rated at no more than 2.0 gallons per minute;
- iii. Bathroom sink aerators with a volume of no more than one gallon per minute;
- iv. All urinals in commercial structures shall be replaced with urinals rated at no more than 0.5 gallons per flush.

(4) Any remodel of an existing structure that uses water from the Los Osos groundwater basin that requires a construction permit pursuant to this title, shall require the replacement of plumbing fixtures in the entire structure with the following types of plumbing fixtures:

- i. Toilets rated at no more than 1.28 gallons per flush (HET);
- ii. Showerheads rated at no more than 2.0 gallons per minute;
- iii. Bathroom sink aerators with a volume of no more than one gallon per minute;
- iv. All urinals in commercial structures shall be replaced with urinals rated at no more than 0.5 gallons per flush.

(5) The planning director (or designee) is authorized to make determinations for fixtures or projects not specifically designated in the equivalency table in Appendix A.

(6) The equivalency table in Appendix A may be amended by the planning director from time to time to reflect changes in water use and/or water savings.

(7) Owners of existing structures that are retrofitted under this program shall agree to allow their water purveyors to release water use figures to the department of planning and building in order to gauge the effectiveness of the program to the extent allowed by California Law.

(8) Upon retrofitting of the required number of fixtures, the developer shall submit evidence

of the completed retrofits to the department of planning and building. This evidence shall consist of a retrofit verification declaration completed and executed by a licensed plumber and/or contractor. The retrofit verification declaration shall be assigned to and used for development of a specific property or properties or land use permit and shall not be transferred to another parcel.

(9) Upon submittal to the San Luis Obispo County department of planning and building of a completed and executed retrofit verification declaration accompanied by the required fee, the developer shall be issued a water conservation certificate from the department of planning and building. Once the water conservation certificate is issued, the new structure may receive final occupancy approval. The water conservation certificate shall be assigned to and used for development of a specific property or properties or land use permit and shall not be transferred to another parcel, except as provided in the following subsection (e) (10).

(10) Water Conservation Certificates that were issued for vacant parcels inside the Prohibition Zone prior to the effective date of this ordinance may be transferred to specified vacant parcels or land use permits for vacant parcels outside the Prohibition Zone one time before January 1, 2019, except when the County is in a drought emergency as proclaimed by the Board of Supervisors. These water conservation certificates are encouraged to be transferred to vacant parcels with approved Minor Use Permits.

SECTION 2. If any section, subsection, clause, phrase or portion of this ordinance is for any reason held to be invalid or unconstitutional by the decision of a court of competent jurisdiction, such decision shall not affect the validity or constitutionality of the remaining portion of this ordinance. The Board of Supervisors hereby declares that it would have passed this ordinance and each section, subsection, clause, phrase or portion thereof irrespective of the fact that any one or more sections, subsections, sentences, clauses, phrases or portions be declared invalid or unconstitutional.

SECTION 3: Before the expiration of 15 days after the adoption of this ordinance by the San Luis Obispo County Board of Supervisors, it shall be published once in a newspaper of general circulation published in the County of San Luis Obispo, State of California, together with the names of the members of the Board of Supervisors voting for and against the ordinance.

SECTION 4: This Ordinance shall become effective thirty (30) days after its enactment by the Board of Supervisors.

SECTION 5: This Ordinance was evaluated in and is consistent with the Certified Final Supplemental Environmental Impact Report for the Countywide Water Conservation Program (SCH# 20140810) per Section 15162 of the California Environmental Quality Act guidelines. Said Environmental Impact Report complies in all respects with the requirements of the California Environmental Quality Act for purposes of adoption of this Ordinance.

SECTION 6: In accordance with Government Code Section 25131, after reading the title of this Ordinance, further reading of the Ordinance in full is waived.

INTRODUCED at a regular meeting of the Board of Supervisors held on the 6th day of October, 2015, and PASSED AND ADOPTED by the Board of Supervisors of the County of San Luis Obispo, State of California, on the 27th day of October, 2015, by the following roll call to vote, to wit:

AYES: Supervisors Frank R. Mecham, Adam Hill and Bruce S. Gibson

NOES: Supervisors Chairperson Debbie Arnold and Lynn Compton

ABSENT: None

ABSTAINING: None

Debbie Arnold
Chairman of the Board of Supervisors

County of San Luis Obispo,
State of California

ATTEST:

TOMMY GONG
County Clerk and Ex-Officio Clerk
of the Board of Supervisors
County of San Luis Obispo, State of California

By: Annette Ramirez
Deputy Clerk

[SEAL]

ORDINANCE CODE PROVISIONS APPROVED AS TO FORM AND CODIFICATION:

RITA L. NEAL
COUNTY COUNSEL

By: /s/ Whitney McDonald
Deputy County Counsel

Dated: September 29, 2015

STATE OF CALIFORNIA)
COUNTY OF SAN LUIS OBISPO) ss.

I, **TOMMY GONG**, County Clerk of the above entitled County, and Ex-Officio Clerk of the Board of Supervisors thereof, do hereby certify the foregoing to be a full, true and correct copy of an order entered in the minutes of said Board of Supervisors, and now remaining of record in my office.

Witness, my hand and seal of said Board of Supervisors on November 2, 2015.

TOMMY GONG,
County Clerk and Ex-Officio Clerk of the Board of Supervisors

By: Annette Ramirez
Deputy Clerk



SOQUEL CREEK WATER DISTRICT ⁽¹⁾

Water Demand Offset (WDO) Program

What is the Water Demand Offset Program?

Soquel Creek Water District receives 100% of its water from groundwater (<http://www.soquelcreekwater.org/our-water/our-water-groundwater>). The groundwater basin is currently in a state of overdraft. This condition has led to seawater intrusion (<http://www.soquelcreekwater.org/our-water/primary-problem-seawater-intrusion>) detected at the coastline and, if left unresolved, will contaminate the groundwater wells and make them unusable to produce drinking water. The District is seeking a supplemental supply (<http://www.soquelcreekwater.org/planning-our-water-future/purewatersoquel>) to address the problem of seawater intrusion and the Water Demand Offset (WDO) Program serves as a vital part of the District's conservation effort in the interim.

The Water Demand Offset (WDO) Program was implemented in 2003 and allows development to continue, conserve water and to not further impact the overdrafted groundwater basin, leading to seawater intrusion. It requires new development to offset their projected water demand by funding new conservation or supply projects within the District.

The WDO Policy (Resolution No. 16-08) requires the following development projects to offset approximately two times the amount of water they are projected to use so that there is a "net positive impact" on the District's water supply:

- Development projects requiring a new water service;
- Development projects with an existing water service that are undergoing a change in use that is expected to increase water demand, as determined using District established water use factors; and
- Existing commercial customers that are adding new square footage.

Project History

When the Water Demand Offset program was first established, applicants were required to complete their offsets by locating and replacing inefficient toilets within the District with water efficient fixtures. As plumbing codes strengthened and High-Efficiency Toilets (HETs) saturated the market, it became apparent that inefficient toilets were becoming too difficult for individual applicants to locate. Eventually, the Board of Directors voted to replace the toilet replacement program to a fee based system so that the applicants could offset their use by contributing to bigger water savings or supply projects.

Visit our Water Demand Offset Program History (<http://www.soquelcreekwater.org/water-demand-offset-program/water-demand-offset-program-history>) page to learn about the conservation projects that receive WDO funds!

Calculating the Water Demand Offset Requirement

The amount of the Water Demand Offset fee for new development is calculated based on the assumed water use factors which are determined using (1) the development type (e.g. single-family home, retail store, office, etc.), and (2) the size of the development. For example, an office building or retail store would have a lower water factor than a restaurant or a grocery store and a small home would have a lower water factor than a large home. The water demand values, used to come up with the water use factors, were determined from several studies of average water use at each property type and size and have been modified since the program began in 2003 to reflect advances in plumbing.

Existing development projects undergoing a change in use where water use is expected to increase must calculate their fee amount the same way as for a new development but can subtract the existing annual water use. Therefore, the project is only required to offset the new or additional water demand.

After the water use factor is determined, an offset multiplier of 1.6 is applied to the WDO requirement so that the project's water demand is offset by 160% to 200%. Thus, new construction helps to reduce water use overall.

This final offset requirement represents the amount of water (in-acre feet) that the project must offset to help reduce water use overall. At this time, all projects can satisfy their offset credit by paying a WDO fee equivalent to \$55,000 per acre-foot.

For planning purposes you can download the New Applicant Water Demand Offset Form (</documents/forms/wdo-new-applicant-form-and-offset-calculations>) to see how the WDO requirement is calculated for your specific type of development.

- To assure the WDO requirement is properly calculated for a given project, the project applicant must first contact the District and present the proposed building plans.
- At the time new water service or expanded water service is requested, the District will provide the developer/applicant with an estimate of the project's WDO requirements ([/documents/forms/wdo-new-applicant-form-and-offset-calculations](#)).
- The applicant must enter into the New Water Service Applicant Agreement and pay an application fee of \$300 before becoming eligible to be placed on a waiting list to receive offsets.

Completing your Water Demand Offset Requirement



The Water Demand Offset requirements cannot be fulfilled until the applicant has met with District staff, signed the New Water Service Applicant Agreement and has been placed on the waitlist to receive offsets.

Once the WDO requirement has been met, changing the ownership of the site will require the new owner to enter into the New Water Service Applicant agreement with the District to retain the offset credit that has been approved. However, changes in water use or additions to the project may require additional water demand calculations.

At this time, all projects can satisfy their offset credit by paying a WDO fee equivalent to \$55,000 per acre-foot. This fee is broken out:

- 50% of offset fee goes towards long-term water conservation projects (e.g. stormwater recharge, smart metering)
- 50% of offset fee goes to funding the enhanced toilet rebate program (<http://www.soquelcreekwater.org/conserving-water/rebates/residential-toilet>).

WDO fees must be paid in full BEFORE an applicant applies for permits with the County of Santa Cruz or the City of Capitola. WDO fees can only be paid when there are enough toilet rebate credits available to satisfy that portion of their offset. There is a waiting list of applicants to receive toilet rebate offsets. Applicants can only purchase their offset credits from the toilet rebate program when they have reached the top of the list and enough offsets are available.

Green Building Credits

Add green building components to your project and receive a lowered WDO requirement – You may reduce the WDO requirement for your project by going beyond the minimum water efficiency requirements (</node/366>) for toilets, showerheads, turf, washing machines, etc.

The WDO Go Green Credit option reduces offset requirements and project costs for the applicant and lowers water consumption for the new building.

Click here to download the WDO Green Credit applications for residential (</documents/forms/go-green-residential-application>) or commercial (</documents/forms/go-green-commercial-application>) properties. Click here for the Indoor and Landscape Water Use Efficiency Ordinances (</node/366>).

Questions? 831-475-8500 ext. 156

Call Conservation staff at extension 156 if you have any questions regarding the WDO requirements or the "Go Green" Program.

For all requirements of new or expanded construction and change of use requirements, see Residential (/residential) or Commercial (/commercial) Construction section.

WDO program documents

- New Applicant WDO Form (/documents/forms/wdo-application-water)

WDO Green Credits Program fact sheets:

- Residential properties (/documents/forms/go-green-residential-application)
- Commercial properties (/documents/forms/go-green-commercial-application)

Water Demand Offset Program

Water Demand Offset Program History (/water-demand-offset-program/water-demand-offset-program-history)

Conserving Water

Stage 3 Water Shortage Emergency (/stage3-2017)

Our Water Waste Rules

Rebates

Your Neighbors Saving Water

Water Wise Grants (/conserving-water/water-wise-grants)

Retrofit on Resale (/conserving-water/retrofit-resale)

District Doing Our Part (/conserving-water/district-doing-our-part)

Water Demand Offset Program

Free Water Wise Housecalls (/conserving-water/free-water-wise-housecalls)

Water-Smart Gardening (/node/1124)

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What's On Tap Quarterly Newsletter (/news/whats-tap-quarterly-newsletter)

Work With Us (/work-us)



SOQUEL CREEK WATER DISTRICT ⁽¹⁾

Water Demand Offset Program History

How does the Water Demand Offset (WDO) Program actually save the community water? The program currently requires all new development projects to offset about two times the amount of water they're expected to use. Project applicants meet their WDO requirement by paying fees which are used by SqCWD to fund conservation projects that reduce water use elsewhere in the District. This way, the District assures that development in our service area doesn't further contribute to groundwater overdraft conditions and actually helps the basin to recover!

Current water-saving projects funded by WDO fees

NO-DES Hydrant Flushing Machine

On July 21, 2015, the Board of Directors voted to direct WDO fees towards the District's purchase of the NO-DES hydrant flushing machine.

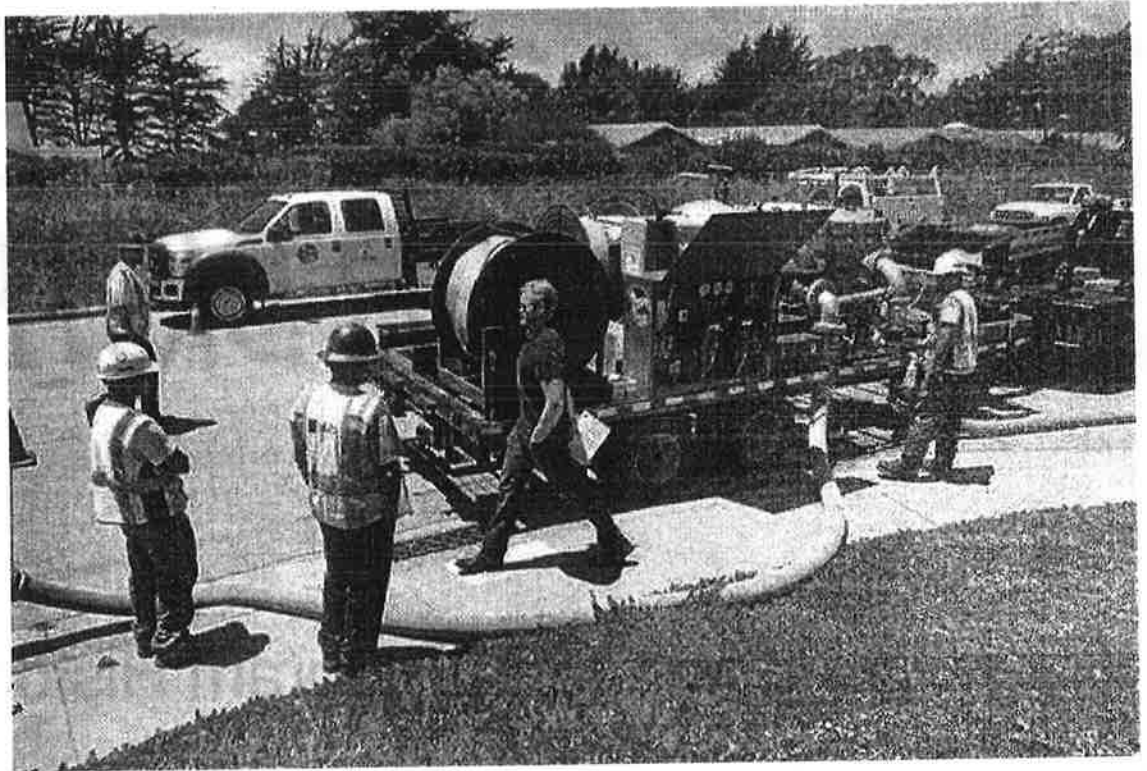
The NO-DES machine will be used by the District to resume water main flushing to maintain water quality throughout the District. As traditional main flushing methods result in water being released to storm drains or the sanitary sewer, the District's water main flushing program had been suspended for the last two years due to the drought and long-term water shortage (except as required by law).

The NO-DES machine recycles the water used to flush water mains, resulting in a water savings of approximately 7.5 -18 acre-feet (that's 2,443,883 – 6,000,000 gallons) per year!

Water Efficient Plumbing Retrofits at Public Schools

In 2014, the Board of Directors elected to direct WDO fees towards funding water efficient plumbing retrofits at the following public schools within the District:

- Aptos Junior High, Rio Del Mar Elementary, Mar Vista Elementary and Valencia Elementary - toilets, urinals, and faucets
- Soquel High School – urinals and faucets
- Main Street Elementary,



Soquel Elementary, and New Brighton Middle School - toilets and faucets

Because school restrooms are used so frequently, replacing just one 3.5 gallon per flush (GPF) girl's restroom toilet with a 1.28 GPF toilet can save 36,000 gallons of water per year! By funding the replacement of less efficient fixtures at the schools, the District can save 5 acre-feet (1,629,255 gallons) of water per year. That is the equivalent of over 100 residential swimming pools!

For more information on the benefit of replacing old school fixtures with water efficient ones, click here (http://www.allianceforwaterefficiency.org/Schools_K_-_12.aspx).

Past water-saving projects funded by WDO fees

Toilet and Urinal Retrofits

When the WDO program was adopted by the Board of Directors in 2003, new water service applicants were required to locate and replace older, high-water using toilets and urinals within the District service area with water-efficient models. During this phase of the program, new service applicants replaced enough fixtures to save about 115 acre-feet of water per year!

In 2008, the Board voted to switch from having new water service applicants retrofit fixtures to collecting fees to support a District-managed toilet & urinal replacement program. In this program, the District hired a plumber to replace customer's toilets and urinals using more than 1.6 gallons per flush with High Efficiency Toilets (HETs). The program ran from 2009 to 2011 and in total, approximately 1,300 fixtures were replaced.

Water Demand Offset Program

[Water Demand Offset Program History \(/water-demand-offset-program/water-demand-offset-program-history\)](/water-demand-offset-program/water-demand-offset-program-history)

Conserving Water

[Stage 3 Water Shortage Emergency \(/stage3-2017\)](/stage3-2017)

[Our Water Waste Rules](#)

[Rebates](#)

[Your Neighbors Saving Water](#)

[Water Wise Grants \(/conserving-water/water-wise-grants\)](/conserving-water/water-wise-grants)

[Retrofit on Resale \(/conserving-water/retrofit-resale\)](/conserving-water/retrofit-resale)

[District Doing Our Part \(/conserving-water/district-doing-our-part\)](/conserving-water/district-doing-our-part)

[Water Demand Offset Program](#)

[Free Water Wise Housecalls \(/conserving-water/free-water-wise-housecalls\)](/conserving-water/free-water-wise-housecalls)

[Water-Smart Gardening \(/node/1124\)](/node/1124)

[Hire a Green-Gardener \(/node/1342\)](/node/1342)



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News (/news)

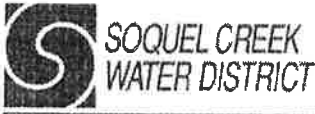
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[What's On Tap Quarterly Newsletter \(/news/whats-tap-quarterly-newsletter\)](/news/whats-tap-quarterly-newsletter)



New Applicant Water Demand Offset Form

Applicant Information

Property owner name

_____ Last name or company name _____ First name (if applicable) _____

Contact person (if different from property owner)

_____ First and last name _____ Title (if applicable) *example: manager* _____

Mailing address

_____ Street address, apartment no., P.O. box _____ City _____ Zip Code _____

Telephone number

_____ Home _____ Work _____

Project Information

Project address

_____ Street address, apartment no., P.O. box _____ City _____ Zip Code _____

APN number

_____ Notes _____

Residential water use factors in acre-feet (AF)

- Apartment (in complex) - 0.155 / apartment
- Apartment (added to site) - 0.103 / apartment
- Apartment (senior complex) - 0.086 / apartment
- Condominium, residential - 0.178 / dwelling
- Mobile Home - 0.120 / mobile home
- Single family (lot > 0 to < 0.095 acres) - 0.178 / dwelling
- Single family (lot = 0.095 to < 0.255 acres) - 0.258 / dwelling
- Single family (lot = 0.255 to < 0.5 acres) - 0.516 / dwelling
- Single family (lot = 0.5 to < 1 acre) - 0.890 + any ADU offset
- Single family (lot >= 1.0 acre) - Prorated at 0.890 AF per acre of land + any ADU offset
- ADU (Accessory Dwelling Unit)
 - ADU < 640 sq. ft. - 0.103
 - ADU 640 sq. ft. to 800 sq. ft. - 0.120
 - ADU 800 sq. ft. up to 1200 sq. ft. 0.155

- Group Housing (fraternities, sororities, boarding, convalescent) - 0.068 / occupant
- Hair Salon, Barber - 0.162 / 1,000 sq. ft. (gross floor area)
- Health Club (w/ aquatics) - 0.216 / 1,000 sq. ft. (gross floor area)
- Health Club (wo/ aquatics) - 0.117 / 1,000 sq. ft. (gross floor area)
- Laboratory - 0.082 / 1,000 sq. ft. (gross floor area)
- Laundromat - site specific - to be calculated
- Manufacturing (other than beverages, chemicals) - 0.056 / 1,000 sq. ft. (gross floor area)
- Motel/Hotel (guest rooms only) - 0.109/ room
- Motel/Hotel (guest rooms plus restaurant, shop, meeting rooms) - site specific
- Offices (building trades contracting) - 0.026 / 1,000 sq. ft. (gross floor area)
- Offices (general, nonmedical, includes chiropractor) - 0.053 / 1,000 sq. ft. (gross floor area)
- Offices (medical, dental) - 0.162 / 1,000 sq. ft. (gross floor area)
- Offices (converted from house, nonmedical) - none
- Offices (converted from house, medical) - 0.187 / 1,000 sq. ft. (gross floor area)
- Park (w/ restroom, irrigated turf) - 1.246 / acre
- Park (w/ community building) - 1.513 / acre
- Restaurant (full service - 3 meals, dish washing) - 1.027 / 1,000 sq. ft. (gross floor area)
- Restaurant (Fast-food/takeout w/ on site prep.) - 0.419 / 1,000 sq. ft. (gross floor area)
- Restaurant (Takeout w/ minimal on site prep.) - 0.233 / 1,000 sq. ft. (gross floor area)
- Service Station (w/ Mini Mart) - 0.609 / Site
- Service Station (wo/ Mini Mart) - 0.411 / Site
- Store (Downtown w/ existing landscape) - 0.021 / 1,000 sq. ft. (gross floor area)
- Store (Freestanding, w/ landscape) - 0.069 / 1,000 sq. ft. (gross floor area)
- Store (Department w/ incidental salon/coffee) - 0.039 / 1,000 sq. ft. (gross floor area)
- Store (Grocery w/ produce) - 0.247 / 1,000 sq. ft. (gross floor area)
- Warehouse, wholesale - 0.044 / 1,000 sq. ft. (gross floor area)
- Other - Site specific - to be calculated

Commercial water use factors in acre-feet (AF)

- Auto Repair - 0.024 / 1,000 sq. ft. (gross floor area)
- Auto Sales - site specific - to be calculated
- Bank or S&L (Downtown w/o landscaping) - 0.030 / 1,000 sq. ft. (gross floor area)
- Bank or S&L (Suburban w/ landscaping) - 0.135 / 1,000 sq. ft. (gross floor area)
- Bar - 0.233 / 1,000 sq. ft. (gross floor area)
- Church - 0.092 / 1,000 sq. ft. (gross floor area)
- Church (w/ school or day care) - 0.121 / 1,000 sq. ft. (gross floor area)
- Commercial (service or manufacturing zone) - 0.047 / 1,000 sq. ft. (gross floor area)
- Commercial (neighborhood office and retail) - 0.233 / 1,000 sq. ft. (gross floor area)

Offset Calculations

Single-family	Number of units _____ x (water use factor) _____ x 1.60 = _____ offset (acre-feet)
Condominium	Number of units _____ x (water use factor) _____ x 1.60 = _____ offset (acre-feet)
Apartment	Number of units _____ x (water use factor) _____ x 1.60 = _____ offset (acre-feet)
Mobile Home	Number of units _____ x (water use factor) _____ x 1.60 = _____ offset (acre-feet)
ADU (Accessory Dwelling Unit)	Number of units _____ x (water use factor) _____ x 1.60 = _____ offset (acre-feet)
Motel/Hotel	Number of rooms _____ x (water use factor) _____ x 1.60 = _____ offset (acre-feet)
Commercial (square feet)	Total square feet _____ / 1,000 = _____ x (water use factor) _____ x 1.60 = _____ offset (acre-feet)
Commercial (acre)	Total acreage = _____ x (water use factor) _____ x 1.60 = _____ offset (acre-feet)
Commercial (other)	_____ x (water use factor) _____ x 1.60 = _____ offset (acre-feet)

Total offset required for this development = AFY (one acre-foot = 325,851 gallons)

Staff Signature: _____
Revised 7/31/2014

Date: _____



Go Green Program Water Demand Offset Residential Green Credits

Get Credit for Green Building

Reduce your Water Demand Offset (WDO) fees for your new or expanded water service by going beyond the minimum District requirements with toilets, showerheads, washing machines etc. The WDO Green Credit Program reduces project costs for the developer and water costs for the end user.

What Qualifies for Green Credit?

Your project's water demand will be reduced according to the following categories; Blue, Silver, Gold or Platinum, plus options A-E. A calculated percentage of expected water savings is applied to your project's overall water demand which lowers the WDO fees. Shown below are the fixtures or measures with the associated water saving category required to qualify for green credit. The "Blue" through "Platinum" categories must be selected in their progressive order. The "Blue" category must be selected to be eligible for any additional A-E options.

Blue: Ultra high-efficiency toilets (UHET) that use 0.8 gallons or less per flush (gpf).

Silver: Showerheads with a flow of 1.5 gallons per minute (gpm) or less.

Gold: Bathroom faucets with a flow of 1 gpm or less.

Platinum: No turf (turf is a ground cover surface of mowed grass.) and **no overhead spray** irrigation for the first 5 years. *Low to very low* plant species and permeable hardscape are recommended.

Options A through E can be chosen independently of the other water conserving categories and are not cumulative but may only be added to the project if the requirements for the Blue category (toilets) have been met.

Washing machines with an Integrated *Water Factor* of 3.2 or less. Water factor is the number of gallons per cycle per cubic foot of water.

Hot-water recirculation systems which are "on-demand." Timer based systems are not included in this program.

Weather-based irrigation controllers

Graywater rough plumbed or connected to a subsurface irrigation system

Measure proposed by applicant: you have the option of proposing a water saving measure. Custom water savings and offset credits will be calculated.

Green Credits Save Money

The table below demonstrates the water and cost savings for a typical single-family residence by implementing green measures. Besides the immediate dollar savings from having to pay for less water demand offset fees, there are other benefits. Many land use agencies offer green building points for water saving measures. The long-term benefits of better water-use efficiency in your development include lower water, wastewater and energy bills, while preserving the health and sustainability of the aquifers that provide our water. The costs, number of fixtures and turf area in the table below are approximations based on a single family residence paying a fee of \$55,000 per acre-foot of offset water. Exact savings will vary depending on the size of the development, which options are chosen and cost of fixtures.

How to Apply

Decide what category best fits your development and fill out the Residential Green Credit Application. Submit the application to District staff for review and to calculate your water savings and monetary savings from going green. If you have any questions please call 475-8500.

Potential money saving examples for a typical single-family residence

Options A-E are not cumulative. The cost and number of fixtures and turf area are approximations based on a single family residence paying a WDO fee of \$55,000 per acre-foot of offset. *For approximate net savings and the long term benefits see paragraph above: "Green Credits Save Money."

Water Saving Category	Green Measures Included	Additional cost for	% Water savings	Cost savings from a lowered WDO fee.	Approx. net savings with Green Credits*
Blue	Ultra High-Efficiency toilets (.8 gpf)	\$0	Cumulative 5.1%	Cumulative \$1,158	Cumulative \$1,158
Silver	Blue + showerheads (1.5 gpm)	\$0	7.6%	\$1,726	\$1,726
Gold	Silver + bathroom faucets (1 gpm)	\$0	8.9%	\$2,022	\$2,022
Platinum	Gold + no turf (no overhead spray)	\$0	14.6%	\$3,316	\$3,316
Option A	Weather-based irrigation controllers	\$150	Not cumulative 2.4%	Not cumulative \$545	Not cumulative \$395
Option B	HE clothes washers (3.2 water factor)	\$100	3.6%	\$818	\$718
Option C	Hot-water recirculation system (on demand)	\$600	1.7%	\$386	-\$214
Option D1	Graywater (rough plumbed)	\$500	1.0%	\$227	-\$273
Option D2	Graywater (connected to irrigation)	\$2500	4.0%	\$909	-\$1,591
Option E	Measure proposed by applicant	Water savings, cost savings, and fixture or measure eligibility will be determined by staff on a case-by-case basis.			



Residential Green Credit Application

Property owner's name _____
 Last name or company name _____ First name (if applicable) _____
 Property location _____
 Street and City _____ Assessor's Parcel Number (APN) _____
 Contact person _____
 First and last name _____ Title (if applicable) *example: project manager* _____
 Phone and e-mail _____
 phone number _____ e-mail address _____

GREEN MEASURES

Check appropriate green measures for your development
 Questions? Call 475-8500 for more information

Category	Green Measure Included	Cumulative % Water Savings	Total % Water Savings
<input type="checkbox"/> Blue	Ultra High-Efficiency Toilets (0.8 gpf or less)	5.1%	
<input type="checkbox"/> Silver	Blue + shower (1.5 gpm or less)	7.6%	
<input type="checkbox"/> Gold	Silver + faucets (1.0 gpm or less)	8.9%	
<input type="checkbox"/> Platinum	Gold + no turf and no overhead spray irrigation	14.6%	
Other Water Saving Measures (eligible only if Blue Category above is also selected)		Not cumulative	
<input type="checkbox"/> Option A	Weather-based irrigation controller	2.4%	
<input type="checkbox"/> Option B	Clothes washer with 3.2 Integrated Water Factor or less	3.6%	
<input type="checkbox"/> Option C	Hot water recirculation system (on demand)	1.7%	
<input type="checkbox"/> Option D1	Graywater (rough plumbed)	1.0%	
<input type="checkbox"/> Option D2	Graywater (connected to an irrigation system)	4.0%	
<input type="checkbox"/> Option E	Proposed measure, custom calculations for water savings and WDO % factor		
Total % Water Savings from Categories and Options A-E			

% Water Savings based on a typical single family residence.

CALCULATIONS

100% - _____ = _____ X _____ = _____
 Total % water savings WDO % reduction factor Offset required (acre feet) WDO Offset after green measures

_____ X _____ = \$ _____
 WDO Offset before green measures Current WDO fee per acre foot WDO fee without green credit

_____ X _____ = \$ _____
 WDO Offset after green measures Current WDO fee per acre foot WDO fee with green credit

Cost savings \$ _____

VERIFICATION (District use only)

Green Credit Approved Denied (If denied, indicate reason)

By: _____ Date _____

Notes: _____

Inspection/ approval

Inspected by _____ Date _____

Get Credit for Green Building

Reduce the Water Demand Offset (WDO) fees for your new or expanded water service by going beyond the minimum District requirements by using ultra high-efficiency toilets, showerheads, washing machines, etc. The WDO Green Credit Program reduces project costs for the developer and water consumption for the end user.

What Qualifies for Green Credit?

Your project's water demand can be reduced by going beyond the plumbing and building standards for new development. A calculated percentage of expected water to be saved is subtracted from your project's overall water demand which lowers the WDO fees. Here are the fixtures or green measures to choose from:

- ◆ **Ultra High-Efficiency Toilets (UHET):** 0.8 gpf or less. If UHET's are proposed, applicants can pick any of the following measures:
- ◆ **Waterless urinals**
- ◆ **Showerheads:** 1.5 gpf or less
- ◆ **Bathroom Faucets:** private applications, 1 gpm or less
- ◆ **Washing Machines:** 4.5 Water Factor or less
- ◆ **Ice Machines:** CEE Tier 2 for potable water use
- ◆ **Pre-rinse spray valves:** 1 gpm or less
- ◆ **Rain water harvesting systems:** 1,000 gallon minimum storage
- ◆ **Graywater:** rough plumbed
- ◆ **Graywater:** connected to an irrigation system
- ◆ **No turf and no overhead spray irrigation**
- ◆ **Proposed measure:** Identify other devices for consideration that would save water.

There shall be no partial installation of water-efficient fixtures (e.g., you can't just install half water-efficient showerheads and the rest regular showerheads).

Follow these steps:

- ◆ **Step 1** - Submit a "New Water Service" application.
- ◆ **Step 2** - Submit the *Commercial Green Credits Application* (see reverse) The District's Conservation staff is available for advice regarding your project.
- ◆ **Step 3** - After you submit your application indicating the high-efficiency devices you propose to install, District staff will calculate your projected water savings and your revised Water Demand Offset requirement.
- ◆ **Step 4** - You will be notified of your projected water savings by "going green" and your lower revised Water Demand Offset fees. Pay WDO fees.
- ◆ **Step 5** - "Unconditional Will Serve" application approval (or denial).
- ◆ **Step 6** - After installation of the proposed water efficient devices, staff will perform a site inspection to verify compliance.

Going green saves you green?

Here's an example of money savings by taking advantage of the "green credits" option.

A new take-out restaurant was required to offset 0.262 acre-feet of water. The developer decided to take advantage of the Green Credit Program and installed ultra high-efficiency toilets (0.8 gallons per flush or less), an air-cooled ice machine (rated as Tier 2 for water use by the Consortium for Energy Efficiency), and a landscape with only low water use plants and low-volume drip irrigation (i.e. no turf and no overhead irrigation). By incorporating these measures, the offset amount was lowered 27% to 0.191 acre-feet, resulting in an up-front cost savings of \$3,905 for the developer. Net cost savings will vary, but are estimated to be significant even after accounting for possible increased costs for the water and energy efficient equipment.

Besides the immediate dollar savings from lower WDO fees, the long-term benefits of going green include lower water, wastewater and energy bills, while preserving the health and sustainability of the aquifers that provide our water. Additionally, many land use agencies offer green building points for water saving measures.

Questions? Contact the District's Conservation and Customer Service Field Manager (831) 475-8500 ext. 156



Commercial Green Credit Application

Property owner's name _____
 Last name or company name _____ First name (if applicable) _____
 Property location _____
 Street and City _____ Assessor's Parcel Number (APN) _____
 Contact person _____
 First and last name _____ Title (if applicable) *example: project manager* _____
 Phone and e-mail _____
 Best daytime phone number _____ e-mail _____

Green Measures

Check appropriate green measures for your development. Questions? Call 475-8500 ext. 156

Green Measures	# proposed
<input type="checkbox"/> Ultra High-Efficiency Toilets (UHET): 0.8 gpf or less If UHET's are proposed, applicants can pick any of the following measures:	
<input type="checkbox"/> Waterless urinals	
<input type="checkbox"/> Showerheads: 1.5 gpf or less	
<input type="checkbox"/> Bathroom Faucets: private applications, 1 gpm or less	
<input type="checkbox"/> Washing Machines: 4.5 Water Factor or less	
<input type="checkbox"/> Ice Machines: CEE Tier 2 for potable water use	
<input type="checkbox"/> Pre-rinse spray valves: 1 gpm or less	
<input type="checkbox"/> Rain water harvesting systems: 1,000 gallon storage minimum	
<input type="checkbox"/> Graywater: rough plumbed	
<input type="checkbox"/> Graywater: connected to an irrigation system	
<input type="checkbox"/> No turf and no overhead spray irrigation	
<input type="checkbox"/> Proposed measure: custom calculation for water savings and WDO % factor	

DISTRICT USE

_____ WDO "Total offset required" without Green credit (from "New Applicant Water Demand Offset Credit Form")
 Acre-ft _____
 _____ Percent water savings from proposed green measures (Calculations attached)
 X _____ Green Credit "WDO % reduction factor" = 100% - percent water savings
 _____ = WDO total offset required with Green Credit
 Acre-ft _____

VERIFICATION (District use only)

Green credit approved (preliminary before building) Denied (If denied, indicate reason)

By: _____ Date _____

Notes: _____

Inspection/ approval after building finished for appropriate green measures.

Inspected by _____ Date _____

Calculation sheet attached to application

ADMINISTRATIVE PROCEDURES

For

WATER DEMAND OFFSET REQUIREMENTS

DEVELOPMENT WATER BUDGETS (Section 14-8.3 SFCC 1987)

CITY WATER BUDGET (Article 25-9 SFCC 1987)

CITY WATER BANK (Article 25-10 SFCC 1987)

WATER CONSERVATION CREDIT PROGRAM (Article 25-11 SFCC 1987)

WATER RIGHTS TRANSFER PROGRAM (Article 25-12 SFCC 1987)

(Ord. 2009- 38 Adopted on August 12, 2009 and Effective January 1, 2010)

**EXHIBIT A
RESOLUTION 2010-20
Adopted March 31, 2010**

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Appendix I, Fee Chart

Appendix II, Forms

- A. Water Offset Memo (cover Memo for the Water Budget)
- B. Agreement to Construct and Dedicate (ACD)
- C. Agreement for Metered Service (AMS)
- D. Utility Service Application
- E. Water Offset Assessment and Dedication Form
- F. Water Conservation Contract Application Form and Instructions
- G. Retrofit Rebate Application Forms, Instructions and Verification Form
- H. Water Rights Transfer Certificate

Note; All forms referenced in this document will be available on the Water Division Engineering Section, Water Conservation Office and Water Budget Office (Land Use Department) websites. Hard copy will also be available at all three City offices.

Appendix III, Reference Documents

- A. Standard Water Use Formulas, Resolution 2009-83
- B. SFCC 14-3.16, Land Development Code Variances
- C. SFCC 14-3.17, Land Development Code Appeals
- D. Rule No. 9, SFCC 25 Exhibit A
- E. List of Qualifying Rebates Types

INTRODUCTION

These administrative procedures describe how City staff will implement Ordinance 2009-38. A Summary of each section of the Administrative Procedures is below.

Section 1; Development Water Budgets and Building Permit Requirements (SFCC 14-8.13)

This Section explains how City staff approves annual water budgets for prospective developers requesting water service from the City. Based on the estimated demand in the water budget, the procedures describe how applicants are required to offset their demand to obtain a building permit, either through dedication of water conservation credit or transferred water rights.

Section 2; Conservation Credit Programs (SFCC 25-11)

This Section describes how City staff manages the Water Conservation Contract Program and the Rebate Program. These are the two programs that generate conservation credit.

Section 3; Water Rights Transfer Program (SFCC 25-12)

This Section describes how City staff manages the program for transferring water rights to the City. It also explains the steps that need to be followed by an applicant

Section 4; City Water Bank (SFCC 25-10)

This Section explains that the City Water Bank holds water credit derived from conservation programs or from water rights transfers for future water demand offsets. The Section also describes how City staff manages the City Water Bank.

Section 5; City's Water Budget (SFCC 25-9)

This Section explains the how City staff conducts an annual evaluation of the water system supply and projected demand. It also describes how the governing body allocates any available water to the City priorities.

The Public Utility Director and Land Use Department Director can approve up-dates and modifications to the Administrative Procedures consistent with the authorizing ordinance passed by the Governing Body. The Governing Body approves modification of fees associated with the implementation of ordinances.

Throughout this document, the term "City Limit" means the current City boundary plus the annexation areas, as defined in the Annexation Agreement with the County and SPAZZO.

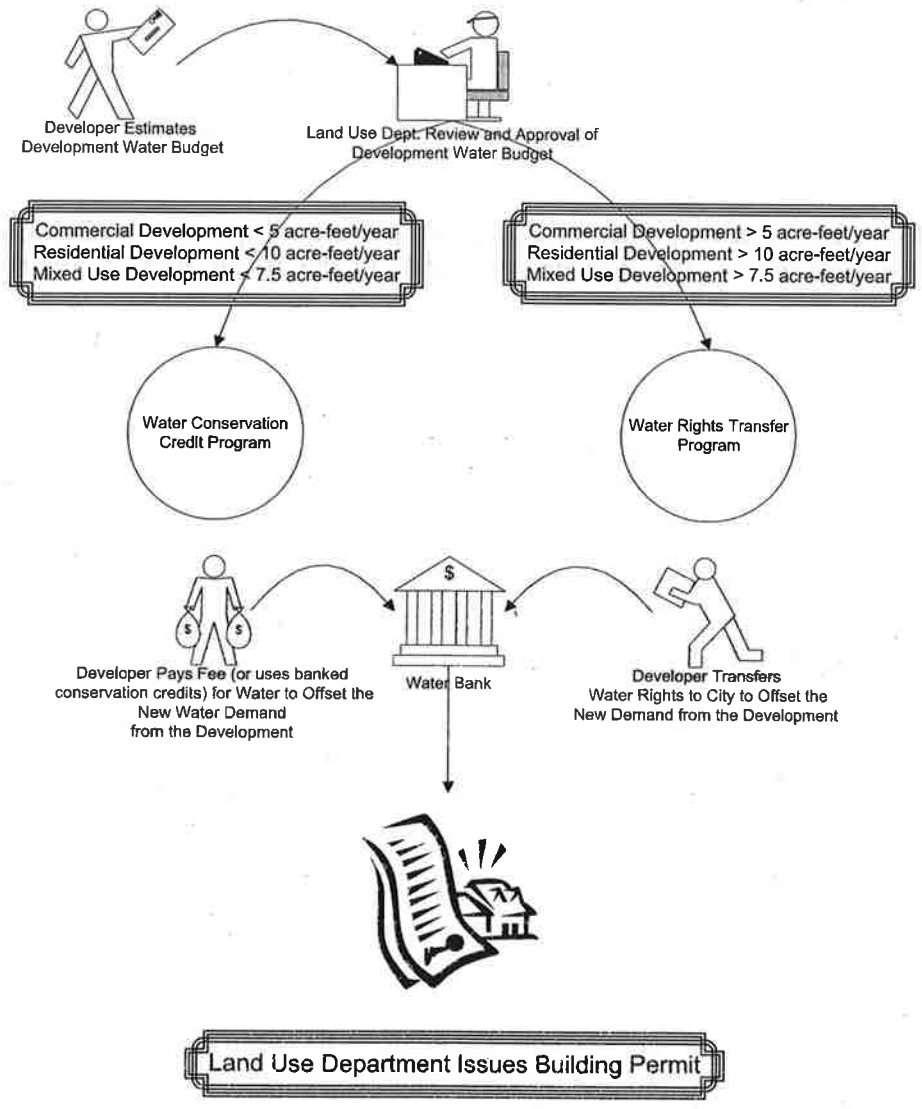
All forms referenced in this document will be available on the Water Division Engineering Section, Water Conservation Office and Water Budget Office (Land Use Department) websites. Hard copy will also be available at all three City offices. See links below.

Water Division Engineering Section; <http://www.santafenm.gov/index.aspx?NID=1150>

Water Conservation Office; <http://www.water2conserve.com/index.html>

Water Budget Office (Land Use Department); <http://www.santafenm.gov/index.aspx?NID=233>

OVERVIEW OF ADMINISTRATIVE PROCEDURES FOR WATER REQUIREMENTS ORDINANCE



Section 1
Development Water Budgets and Building Permit Requirements
(SFCC 14-8.13)

1.1 Summary of Water Development Offset Regulations

The City requires that the impact of proposed new development be offset either through conservation in existing development or transfer of water rights to the City. In general, new development projects with lower water use may offset demand through transfer of water rights and/or through conservation achieved in existing development. New development projects with higher demand are only allowed to offset demand through transfer of water rights. Higher water use projects are commercial projects that require 5 acre feet per year or more, residential projects that require 10 acre feet per year or more or mixed use projects that require 7.5 acre feet per year or more.

To determine how much to offset for a proposed project, an applicant must first develop a water budget for their proposed project and submit it to the Water Budget Administrative Office (WBAO) for review and approval. However, if the project is required to go through the Development Review Team process, then WBAO staff will provide the water budget to the Water Division engineering staff for review and approval. Once the City approves the water budget, the developer must a) dedicate privately owned conservation credits to their project, b) pay a fee to the City for dedication of City owned conservation credits to their project, or c) dedicate water rights to their project. For projects with higher water demand, only water rights can be used to meet the off-set requirement. This applies to commercial projects that require 5 acre-feet per year (AFY) or more, residential projects that require 10 AFY or more and mixed use projects that require 7.5 AFY or more. If the applicant completes the dedication process and all other code requirements are met, the applicant can receive building permits for individual structures on the project site.

Representatives of a development project that have adopted an alternative development water budget and property owners that have agreed to a Conservation Contract shall provide disclosure statements to prospective buyers which shall be included on all recorded plats and development plans.

1.2 Determining Whether a Water Budget is Required, SFCC 14-8.13(C)

1.2.1 The type of new development projects that are required to develop a water budget are;

- a) Final subdivision plats, except in the case of:
- plats that create tracts of land according to an approved master plan where additional subdivision of land or a more detailed development plan is necessary before permitting of buildings and
 - plats where the proposed development is included in and consistent with an already approved development water budget and has complied with the Water Rights Transfer Program or the Water Conservation Credit Program

- b) Development plans
 - if phased, each phase of the Development Plan is subject to SFCC 25-12 (Section 3.11 of this document).
 - preliminary development plans are exempt.
- c) Major project plans in the Business Capital District
- d) Building permits, except in the case of:
 - when the proposed structure is included in and consistent with an already approved development water budget and has complied with the Water Rights Transfer Program (Section 3 of this document) or the Water Conservation Credit Program (Section 2 of this document);
 - when WBAO staff verify that the property has already met the requirements of the water demand off-set based on the requirements established in the standard water use category (Appendix III.A.) or based on the approved property specific Option B water budget. Verified toilet retrofit credits (previous program), conservation credit, water rights or payment to the City's Water Bank could be used to meet the requirement.
 - additions:
 - where there are no new fixture installations;
 - where there are up to three new water fixtures provided that the increased building area does not exceed 500 square feet
 - shell only permits which will later require tenant improvement permits and
 - replacement of 33% or less of an existing building.
- e) Secondary plumbing permits independent of a building permit which results in an increase of water use, except in the case of:
 - multiple installations in either commercial or multifamily residential uses;
 - spa not exceeding 500 gallons or oversized tub not exceeding 100 gallons;
 - swamp cooler;
 - recirculation fountain not exceeding 1000 gallons of containment area and
 - garden pond not exceeding 2000 gallons.
- f) Changes in permitted land use resulting in an increase in water use;
- g) Projects located outside the City Limits, prior to application for an Agreement to Construct and Dedicate water lines; and
- h) If no water demand off-set was ever brought to the City for a residential structure, and an addition is proposed that does not meet the exception criteria listed above, a pro-rated water off-set will be required. The pre-rated amount will be based on the percentage of the proposed square footage in comparison to the existing square footage. For example, a 1,000 square foot addition on an existing 2,000 square foot residential structure on a lot less than 6,000 square feet, would need to bring .075 acre feet of water for the addition ($.15 \text{ for a full dwelling unit} \times 50\% = .075$).

1.2.2 A development water budget also may be established for a single phase of a multi-phase development project only if the project is formally phased for infrastructure permits and financial guarantee established for the phase.

1.3 Creation and Approval of a Development Water Budget, SFCC 14-8.13(C)

An approved development water budget is required to obtain a building permit for new structures and for all new uses, as described above.

- 1.3.1** In creating a development water budget, applicants may choose one of the following options. As described above, the applicant will submit the water budget to WBAO for review and approval. However, if the project is required to go through the Development Review Team process, then WBAO staff will provide the water budget to the Water Division engineering staff for review and approval.

Option A; Calculate a development water budget based on standard formulas using historical water use data for similar type of development. These standard formulas and supporting data are found on the Utility Service Application, available at the City's Land Use Department, Water Budget Administrative Office. The Utility Service Application shall be updated by Water Division staff as new data becomes available in periodic revisions of the Water Use in Santa Fe Report; or,

Option B; Develop a detailed alternative development water budget for the development project supported by reliable data that demonstrates that the anticipated annual water use will be less than if based on the Water Division's standard formulas (Appendix III A of this document). This is called an "Option B" water budget.

- 1.3.2** The City shall allow reduction in the consumptive water rights required to be transferred by the amount of consumptive water rights required for any Santa Fe Homes Program unit, which is a Housing Opportunity Program unit as per a valid Housing Opportunity Program Agreement or any dwelling unit meeting the definition of a low-priced dwelling unit as set forth in SFCC 26-2. The reduction is contingent upon the applicant entering into an agreement or other approved document with the City regarding the low-priced dwelling units.

- 1.3.3** The Utility Service Application will be reviewed the by WBAO with assistance from the Water Division engineering staff, if necessary. The Utility Service Application and the alternative development water budget shall contain the following information:

- a) A description of all proposed and existing structures on the subject parcel of land together with a complete description of all proposed and existing water fixtures and other water using devices and equipment to be installed or constructed on the subject parcel;
- b) A description of all proposed water uses for the subject parcel of land, separating such uses by indoor and outdoor categories and including the total area of proposed and existing landscaping, not including water to be used during and for construction; and
- c) A quantification in gallons and acre-feet of the total proposed water usage on the subject parcel of land on an annual basis. In the case of phased development, the quantification shall also include the proposed water usage by each phase of development.

- 1.3.4** The City's preliminary approval of the water budget shall be documented through issuance to the applicant of a Water Offset Memo, summarizing the total demand to the development project and signed by the WBAO official. For projects requiring Land Use Department development review and Governing Body approval, the preliminary water budget will be submitted as part of the subdivision, development plan or building permit application to the Land Use Department, whether preliminary or final. Once the proposed development is approved, the applicant will complete either the Agreement to Construct and Dedicate (ACD) or Agreement for Metered Service (AMS) forms. For smaller projects not requiring development review and approval, the preliminary water budget will be submitted to the Water Division along with the completed AMS form.
- 1.3.5** Completed AMS and ACD forms, and accompanying approved Utility Service Application will be reviewed by the Water Division engineering staff. Following review and approval, the Water Division will document approval through a memo addressed to the applicant and copied to WBAO. (Note; A template of the approval memo will be approved by the City Attorney's Office as to form). The final approved plat and/or development plan is recorded at the Santa Fe County Clerk's Office by the Land Use Department staff. If an Option B Water Budget is completed, that document must be recorded with the County by the applicant and a copy must be provided to WBAO.
- 1.3.6** For projects that can offset their demand through conservation, WBAO or the Water Division will issue an invoice to the applicant for the payment required. The offset fee is based on the City's cost for purchased water rights plus a \$1,000 administrative fee, as shown in Appendix I. The City's 2010 consumptive use water rights purchase price is \$15,000 per acre-foot. Applicants can also fulfill the demand offset through dedication of conservation credit derived from Conservation Contracts, as described in Section 2 of this document. As described in Section 2.4, credit will be applied for previous toilet retrofits verified by February 28, 2010.

1.4 Modification of a Development Water Budget, SFCC 14-8.13(B)

1.4.1 A development water budget may be modified when:

- a) A proposed new structure or use replaces and is similar to the existing structure or use, and when the prior structure was occupied or the use active no less than 12 months prior to water budget application. In this case the development water budget may be reduced to an amount equal to the average annual consumption in the previous 24 months, or some other time period approved by the Governing Body for a specific development. The credit shall only be given to the replacement of a similar land use category. If the prior use was a commercial use, then the credit can be applied if the proposed use is a commercial use. If the prior use was a residential use, then the credit can be applied if the proposed use is a residential use. These projects shall be required only to offset for difference in water use. Water demand offset payment is based on the City's current cost for purchasing water rights (\$15,000 per acre-foot) plus a \$1,000 administrative fee, as shown in Appendix I. Therefore, current rate is \$16,600 per acre foot.

- b) A development water budget may also be reduced by an amount equal to a specific approved annual water allocation made by the Governing Body for the development project as set forth in SFCC 25-9.6 (Section 5.3 of this document).

1.4.2 Forms for modifying a water budget are available at WBAO and should be submitted to WBAO for review and approval by the Land Use Department, Water Division, and the City Attorney. Approved modifications to water budgets shall be recorded by the applicant with the Santa Fe County Clerk.

1.5 Dedication of Water to Development and Building Permit Processing, SFCC 14-8.13(E)

1.5.1 A building permit application shall not be approved by the Land Use Department until the applicant has dedicated water to meet the approved development water budget for the development project plus a 9.8% contingency that covers water utility delivery requirements, as documented by the Water Offset Assessment and Dedication Form and complied with the conditions thereof.

(Note; The contingency water is comprised of water used for community health and safety purposes, such as fire fighting and fire hydrant testing, water used in production for flushing of water distribution and sewer lines, and also results from meter errors, line leaks, and losses from water main breaks.)

1.5.2 Based on the approved water budget for a development project, the applicant shall obtain water through either the Water Conservation Credit Program (Section 2 of this document) or the Water Rights Transfer Program (Section 3 of this document) to meet the development water budget according to the following criteria:

- a) Applications for residential uses which have a development water budget equal to or greater than ten AFY shall obtain water through the Water Rights Transfer Program;
- b) Applications for residential uses which have a development water budget less than ten AFY, designated as small development projects, shall obtain water through the Water Rights Transfer Program or the Water Conservation Credit Program or through a combination of both;
- c) Applications for non-residential uses which have a development water budget equal to or greater than five AFY shall obtain water through the Water Rights Transfer Program;
- d) Applications for non-residential uses which have a development water budget less than five AFY, designated as small development projects, shall obtain water through the Water Rights Transfer Program or the Water Conservation Credit Program or through a combination of both;
- e) Applications with both residential and non-residential uses each in substantial amounts which have a development water budget equal to or greater than seven and one half (7½) AFY year shall obtain water through the Water Rights Transfer

Program. Substantial means having more than 33% of the square footage in residential use; and

- f) Applications with both residential and non-residential uses each in substantial amounts which have a development water budget less than seven and one half (7½) AFY shall either obtain water through the Water Rights Transfer Program or the Water Conservation Credit Program or through a combination of both.

1.5.3 Building Permit Processing

- a) Stand alone structural permit
 - i) Applicant will meet with WBAO staff prior to submittal of the building permit to assess the appropriate water use for the proposed project. WBAO staff will fill-out a Water Offset Assessment and Dedication Form which identifies the amount of water needed to offset the proposed development and the cost. The offset amount will be based on the standard formulas adopted by City Council 2009-83 (Appendix III A of this document). Staff will verify that the amount is available in the City's Water Bank. If the amount is not available in the City's Water Bank, staff will assist the applicant by providing contact names/numbers for conservation credit holders.
 - ii) The applicant will include the Water Offset Assessment and Dedication Form with their building permit submittal (with only the "Assessment Section" filled-out by staff). Prior to issuance of the building permit, the applicant will pay the appropriate fee and provide a copy of the receipt to WBAO staff. WBAO staff will then submit the Water Offset Assessment and Dedication Form (with the "Dedication Section filled-out) to the Building Permit Division to authorize issuance of the permit.
 - iii) A copy of the Water Offset Assessment and Dedication Form and the receipt for payment will also be sent to the Water Bank Administrator. They will deduct the amount of credit from the Water Bank in the name of the specific project.
- b) Multi-family, Commercial or Subdivision Projects
 - i) WBAO staff will fill-out the "Assessment Section" of the Water Offset Assessment and Dedication Form which identifies the amount of water and the cost for this specific building permit application. The offset amount will be based on the standard formulas adopted by City Council 2009-83 (Appendix III A of this document). Staff will verify that the amount is available in the project's account in the Water Bank. If there is not adequate water in the project's account, WBAO staff will advise the applicant to obtain conservation credit (if allowed for the particular project-type), transfer water rights to the City Water Bank or establish a financial guarantee to cover the full amount needed.
 - ii) The applicant will include the Water Offset Assessment and Dedication Form (only the "Assessment Section" is filled-out by WBAO staff) with their building permit submittal. Prior to issuance of the building permit, the applicant will provide proof of conservation credit, water rights or financial guarantee. WBAO staff will then submit the Water Offset Assessment and Dedication Form (with the "Dedication Section" filled-out) to the Building Permit Division to authorize issuance of the permit.

iii) A copy of the Water Offset Assessment and Dedication Form and the receipt for payment (if payment is required) will also be sent to the Water Bank Administrator. They will deduct the amount of credit from the appropriate account in the Water Bank.

1.6 Variances and Appeals, SFCC 14-8.13(F) and (G)

Variances to the Development Water Budget requirements set forth in SFCC 14-8.13 are heard by the Governing Body according to the procedures set forth in SFCC 14-3.16 (Appendix III B of this document). Appeals of City staff decisions regarding implementation of the Development Water Budget requirements shall be heard according to the procedures set forth in SFCC 14-3.17 (Appendix III C of this document).

1.7 Monitoring, Violations and Penalties, SFCC 14-8.13(D)

Beginning the first year that a customer's water service is subject to usage restrictions from an alternative development water budget or a contract for water conservation, the Water Division shall monitor water customer's water usage on an annual basis.

1.7.1 If a water customer exceeds water usage allowable under the customer's alternative development water budget or Conservation Contract in any annual period, the Water Division shall monitor the customer's water usage on a monthly basis and compare current monthly use to the previous year's use in the same month to determine whether the customer has returned to compliance. The Water Division shall also notify the customer of the following:

- a) that the alternative development water budget or Conservation Contract has been exceeded,
- b) that the customer's usage will be monitored monthly to determine whether the customer has reduced water usage to the amount permitted under the alternative development water budget or the Conservation Contract, and
- c) of the consequences that will ensue if the customer does not return to compliance.

1.7.2 Water customers shall be charged a 50% surcharge over the base rate of water on the excess water delivered over annual budgeted or contracted amount for that year.

1.7.3 If, after four months of monitoring, the customer is in compliance with the alternative development water budget or Conservation Contract, the customer shall be so informed and shall then be returned to monitored on an annual basis.

1.7.4 If, after four months of monitoring, the customer's water usage still exceeds the alternative development water budget or Conservation Contract by 10% or more on a monthly pro-rata basis, the Water Division shall immediately notify the customer that they have exceeded the agreement. The Water Division shall re-calculate the alternative development water budget or the Conservation Contract for the customer based on actual consumption over the period of noncompliance and shall notify the customer of the

additional water rights or conservation credit needed to meet the new budget or contract. If the customer does not transfer sufficient water rights or conservation credit to the City within 90 days to make up the difference, the Water Division shall transfer sufficient water conservation credit to the customer to offset the net difference and shall include in the customer's next billing the current cost of those water conservation credit. In addition, the City shall bill the customer the 50% surcharge for the water delivered during this second year over the budgeted or contracted amount.

1.7.5 A customer may, at any time, transfer additional water rights or conservation credit to the City to increase the customer's alternative development water budget or Conservation Contract restriction in order to forestall the imposition of further surcharges for excess water usage.

1.7.6 Customers that fail to provide sufficient water rights or conservation credit or to pay the cost of the water conservation credit and the imposed surcharges shall have water service disconnected in accordance with Rule No. 9, Exhibit A of SFCC 25 (Appendix III D of this document).

1.8 Disclosure, SFCC 14-8.13(D)

Representatives of a development project that have adopted an alternative development water budget and property owners that have agreed to a Conservation Contract shall provide disclosure statements to prospective buyers which shall be included on all recorded plats and development plans. The statements shall include the amount of water to which each lot, unit or other portion of the project is limited under the alternative development water budget or Conservation Contract and shall include a description of the penalties set forth in this paragraph.

Section 2

Water Conservation Credit Programs (SFCC 25-10)

2.1 Summary of Water Conservation Credit Programs

This Section describes how City staff will manage the Water Conservation Contract Program and the Rebate Program. These are the two programs that generate conservation credit.

Water conservation used to offset new demand on the City's water system resulting from new development is partly generated through the Water Conservation Credit Program. Water conservation generated under this program is referred to as water conservation credit. A water conservation credit is accounted for in consumptive-use acre-feet per year (AFY), and represents an amount of water that the holder can be served by the City water system on an annual basis and is transferable within the City of Santa Fe for annual usage.

Upon the request of a water customer, the City may schedule and conduct an on-site water conservation audit to determine ways that the customer may reduce water usage and provide an estimate of the quantity of water that can be conserved. Contact the Water Conservation Office at 955-4225 to schedule an audit.

Water conservation credit may be created through either a Water Conservation Contract or Retrofit Rebate. A Conservation Contract allow water customers to commit to saving water in exchange for monetary savings. Retrofit Rebates partially compensate water customers for retrofitting older water fixtures and appliances with newer more efficient models.

2.2 Water Conservation Contract Program, SFCC 25-11.3(C)(1)

2.2.1 Water customers with a minimum current uninterrupted five year history of water usage and water customers subject to an alternative development water budget may agree to a Water Conservation Contract with the City Water Division. The customer agrees to reduce their annual water usage at their property from the past five year average or from the amount approved under the alternative development water budget. The amount is defined by a fixed quantity in AFY, with a minimum reduction of two one-hundredths (.02) of an AFY (equal to 6,517 gallons per year).

2.2.2 The applicant will fill-out the Water Conservation Contract Application Form (see Appendix 2). The Form will be available on the Water Division website.

2.2.3 The Water Division staff, in coordination with the Utility Billing staff, will retrieve the applicant's past five years water use records and calculate the average annual water use. The Water Division staff will draft, review and approve all Conservation Contracts. (Note; A template of the Conservation Contract will be approved by the City Attorney's Office as to form).

2.2.4 Water Division staff shall verify that conservation measures meet specific criteria for commercial or residential use. Changes from residential uses to commercial uses shall not be eligible for a water Conservation Contract.

- a) Conservation measures for commercial customers shall consist of the following;
 - i) a change in the nature of the business;
 - ii) a change in commercial process;
 - iii) retrofit of older commercial appliances or fixtures with newer, more water-efficient units; or
 - iv) installation of new water conservation technology.
- b) Conservation measures for residential customers shall consist of the following;
 - i) retrofit of older appliances of fixtures with newer more water-efficient units
 - ii) installation of new water conservation technology.

2.2.5 Upon execution of the contract, the contract will be recorded with the County Clerk's Office and a copy will be filed with the City Clerk's Office.

2.2.6 After the Conservation Contract is recorded, the Water Division shall:

- a) track the customer's usage annually to ensure that the promised water conservation savings are achieved and maintained; and
- b) issue to the customer, water conservation credit reflecting the volume of City-transferable water that the customer has committed to conserve. This credit shall be deposited in the Water Bank in the customer's name.
- c) monitor compliance with terms of Conservation Contract (Section 1.7 of this document)

2.2.7 Water conservation credit realized through a Water Conservation Contract may be:

- a) held in a separate water bank account in the customer's name for use by the customer to offset the impact on the City's water system of new development projects (according to Section 1.5.2);
- b) donated to the City for a specified public purpose;
- c) transferred (sold) to the City; or
- d) transferred to another individual's water bank account if the City chooses not to purchase the conservation credit.

2.3 Water Conservation Retrofit Rebate, SFCC 25-11.3(C)(2) and 11-4

The City may obtain and deposit in the City's account in the Water Bank water conservation credit through direct payment to residential and commercial customers of a rebate. This would occur when a customer replaces a high-water-usage appliance, fixture or landscaping with a qualifying water-saving device. Conservation credit could also be added to the City's account in the Water Bank through the City's direct installation of water saving devices at City facilities. A current list of qualifying rebates, the rebate application form and participant instructions will be posted on the Water Division Engineering Section, Water Conservation Office and Water Budget Office (Land Use Department) websites. Hard copy will also be available at all three City offices.

2.3.1 For the rebate to be paid to program participants and credit to be applied to the City's Water Bank account, the following must be met:

- a) The City shall require satisfactory proof from the program participant to confirm that the water customer meets all the requirements of the terms and conditions;
- b) Participating customers shall allow the City Water Conservation Office staff to conduct an inspection prior to, during and after the installation of any retrofits and to provide for collection and disposal of old appliances to ensure that the old appliances do not return to service; and
- c) Upon payment by the City of the Retrofit Rebate to a customer, the City shall deposit the appropriate amount of water conservation credit in the City's Water Bank account.

2.3.2 Administratively, the Water Division engineering and water conservation staff shall establish minimum standards of water-use efficiency for qualifying Retrofit Rebates, as per SFCC 25-11.4. These standards for qualifying use will be posted on the Water Division Engineering Section, Water Conservation Office and Water Budget Office (Land Use Department) websites.

2.3.3 The City shall also establish the quantity of water conserved by each retrofit and the price that it will pay for each water conservation Retrofit Rebate credit, as per SFCC 25-11.14. This information will be posted on the Water Division Engineering Section, Water Conservation Office and Water Budget Office (Land Use Department) websites.

2.3.4 Water conservation credit realized through a Retrofit Rebate shall be held in the City's Water Bank account. This credit shall be used for the following purposes:

- a) for sale to new water customers to fulfill an applicant's approved development water budget; and
- b) for sale to water customers who exceed their allowed water usage under an alternative development water budget or a water Conservation Contract.

2.4 Previous Toilet Retrofit Program

2.4.1 Certified retrofit credits generated from the previous retrofit program (toilet retrofits), and held in the name of various persons or entities, shall be available for use to meet the water demand offset of new development. These certified retrofit credits will be applied based on .025 AFY per retrofit. The new Rebate Program does not allow participants to sell or market rebate generated conservation credit. See Section 2.3.1 (c) of this document.

2.4.2 Certified retrofit credits may be used by the holder for any action identified in 2.3.2.a above. There is no expiration for toilet retrofit credits performed by December 31, 2009 and submitted by May 30, 2010. In addition, the retrofits must be verified by June 30, 2010.

- 2.4.3** Toilet retrofits not verified by June 30, 2010 will not be recognized for conservation credit. The new Rebate Program must be utilized for toilet retrofits performed after December 31, 2009.
- 2.4.4** When a fraction of a toilet retrofit is to be applied for water demand offset, the amount will be rounded up to the full .025 acre feet.

Section 3

Water Rights Transfer Program (SFCC 25-12)

3.1 Summary of the Water Rights Transfer Program

As described in Section 1.5.2, proposed new development projects with larger impacts to the City's water system are required to offset their impact through the transfer of water rights to the City. The following describes the process that staff will use to oversee an applicant's submittal to tender water rights to the City. Review steps and fees are described. This section also describes how City staff will oversee an applicant's water rights transfer application. Sale of water rights and appeals to the New Mexico Office of the State Engineer (OSE) are also described.

3.2 Designating Water Right Transfers, SFCC 25-12.3

The applicant must notify the City, in writing, at the time of the initial tender of water rights for City review and possible acceptance, whether the water rights are to be dedicated to a development water budget or whether the water right is designated for the Water Bank. At any time after their tender, water rights initially designated for the Water Bank can be dedicated to a development by written notification provided by the applicant to the City.

3.3 Tender of Water Rights, SFCC 25-12.4

3.3.1 Water rights proposed to be transferred to the Water Bank for dedication to a development shall be tendered to the City Attorney at whichever review stage is applicable and occurs first in the review of a particular development, according to the following requirements:

- a) Not later than 60 days after the final approval by the Land Use Department, the planning commission or the governing body of the final subdivision plat, except for parcels within a commercial subdivision for which actual use with attendant water budget has yet to be determined;
- b) Not later than 60 days after the final approval of the final development plan by the Land Use Department, the Planning Commission or the Governing Body; or
- c) For developments located outside the City Limits, prior to execution of an agreement with the City to construct and dedicate water lines.

3.3.2 In the case of phased development, water rights tendered for the first development phase shall adhere to 3.3.1 above, and water rights for a subsequent phase of the development shall be tendered to the City Attorney at the time that the infrastructure financial guarantee is posted for that phase of development.

3.3.3 For residential or commercial projects, the applicant has 60 days from recordation to tender the water rights for the whole project or by phase for a phased project. No individual structural permits will be issued until the proportionate amount of water rights

have been transferred to the City. If conservation credit is allowed for the specific project, then the proportionate amount of conservation credit will have to be verified prior to issuance of an individual structural permit.

- 3.3.4** For a phased project that requires water rights, a combination of conservation credit and water rights can be accepted for building permit up to the first five acre feet for a commercial project, up to seven and one-half acre feet for a mixed use project and up to ten acre feet for a residential project. However, after those milestones have been met, all of the water for the entire project must be brought to the City as water rights. The entity responsible for exceeding the milestone must bring the entire project amount in water rights and would be reimbursed for the water credit previously obtained for the project.
- 3.3.5** Water rights designated for the City's Water Bank may be tendered to the City Attorney at any time.
- 3.3.6** The information contained in the tender shall include:
- a) The name and address of the current owner(s) and/or seller(s) of the water rights;
 - b) A description of the development project(s) for which the water rights are designated, or direction that the water rights are designated for the City's Water Bank;
 - c) Proof of ownership of the water rights in the form of: a declaration of water rights; the most recent change of ownership form for the water rights; and any deeds regarding the water rights in the county where the water rights are located;
 - d) A title search or title report for the property to which the water rights are appurtenant;
 - e) Any permits, licenses, or court orders for the water rights, together with a description of the place and purpose of use and point of diversion for the water rights;
 - f) A copy of the agreement between the seller(s) and applicant under which the applicant intends to acquire the water rights; a copy that redacts the price may be acceptable; however, if the applicant uses a letter of credit or escrow pending application approval, however, the City may require an unredacted copy;
 - g) An affidavit from the seller(s) to the effect that the water rights are free and clear of all encumbrances and liens, or that encumbrances shall be released before or at closing and furthermore an affidavit to the effect that no part of the water rights has not been lost through abandonment or forfeiture; and
 - h) Such other documentation as the City may reasonably require related to the water rights.
 - i) Upon tender of water rights for the City's review, the applicant, and not the applicant's representative, shall sign an agreement prepared by the City Attorney acknowledging that the applicant shall abide with the conditions of the regulations.

- j) Upon tender of water rights to the City for review, the applicant shall pay a deposit of \$1000 to be applied against the hydrologic due diligence review of the tendered water rights. The City Attorney shall issue an invoice for this amount and it shall be paid at a City cashier window.
- k) The cost for acquiring the water rights will be determined by the developer and the offerer. The cost is not the rate that is shown in Appendix I. The City is not a party to the developer water rights purchase.

3.4 Due Diligence Review Procedure and City Fee, SFCC 25-12.5

- 3.4.1** The City Attorney shall review the documentation provided within a 60 day due diligence review period and determine in its sole discretion whether the water rights are acceptable to the City for its use in its system and whether the transfer of the rights to a point of diversion acceptable to the City is feasible.
- 3.4.2** During the review period, the City Attorney may request from the applicant additional documentation to aid in the City Attorney's determination. Upon such request, the review period shall be tolled until the additional documentation is provided to the City Attorney.
- 3.4.3** If the City Attorney determines that any or all of the water rights are acceptable for purposes of the transfer, the City Attorney shall notify the applicant in writing of the total amount of consumptive use acre-feet per year acceptable to the City.
- 3.4.4** If the City Attorney determines that the water rights are not acceptable, then the City Attorney shall notify the applicant in writing, specifying the reason(s) for the determination. Upon receipt of this notice, a new review period shall commence, and the applicant shall take steps to change the acceptability of the water rights as specified by the City Attorney in the written notice. If the City Attorney rejects the water rights outright, the applicant may tender other water rights for transfer and a new review period shall commence for the City. This process may be repeated until the City Attorney accepts tender of all water rights required by the City.
- 3.4.5** Applicant shall reimburse the City for its hydrologic due diligence review of the tendered water rights by paying the actual costs as evidenced by invoices from consultants prior to the City Attorney's final written acceptance of water rights into the Water Rights Transfer Program. The City Attorney shall issue an invoice for this amount, and it shall be paid at a City cashier window.

3.5 Acceptance of Water Rights into City Water Right Transfer Program, SFCC 25-12.6

Upon payment of the fees due from the applicant for the City Attorney's due diligence review and determination that tendered water rights are acceptable to the City, the City Attorney shall issue to the applicant the final written acceptance of the water rights into the Water Rights Transfer Program, specifying the total amount of consumptive use in acre-feet per year that the City has approved.

3.6 Water Right Transfer Application and Fees, SFCC 25-12.7

- 3.6.1** After City acceptance of water rights into the Water Rights Transfer Program, the applicant shall prepare a draft application to the OSE to transfer the water rights to the City's designated point of diversion. The draft application shall show the City as a co-applicant. The draft application shall include no less than the total number of consumptive use acre-feet accepted by the City. The application is found on the state engineer's website. The applicant shall publish all necessary legal notices in appropriate newspapers.
- 3.6.2** The content of the water rights transfer application shall be determined by the applicant and the City and completed in a manner acceptable to the OSE. The final water rights transfer application shall be executed by the seller, if applicable, the applicant, and the City. Following the execution and submittal of the transfer application to the OSE by the applicant, the applicant shall not file any subsequent OSE application with regard to those water rights without the written consent of the City.
- 3.6.3** The City and the applicant shall reach mutual agreement regarding the application. The City shall have the discretion to modify or withdraw the application and to discontinue the transfer process if proceeding threatens exercise of the City's water rights under Permit No. RG-20516 et al. The applicant may also withdraw the application, provided the applicant notifies the City in writing one week in advance of any such withdrawal.
- 3.6.4** The applicant shall pay applications fees required by the OSE and legal notice publication fees and costs incurred in any administrative hearing as well as subsequent appeals, if pursued. The City shall receive notice of any hearings and may participate in the hearings as it deems appropriate. The City has ultimate decision-making authority regarding any conditions of approval that any protestant or the OSE may offer that affect the City's existing permit, RG-20516 et al. The applicant has ultimate decision-making authority regarding any conditions of approval that any protestant or the OSE might offer that affect the validity and extent of the water rights being transferred.

3.7 Financial Guarantee Procedure for Issuance of a Building Permit Prior to Completion of Water Rights Transfer and Conveyance, SFCC 25-12.8

- 3.7.1** These financial guarantee provisions shall apply to all water rights designated for development projects within the City Limits. These financial guarantee provisions may also apply to water rights designated for development projects connecting to the City water system outside the City Limits.
- 3.7.2** No building permit shall be issued before water rights transfer completion and conveyance to the City, as set forth in SFCC 25-12.10 (Section 3.9 of this document) and SFCC 25-12.11 (Section 3.10 of this document), except as provided in this section.
- 3.7.3** The applicant may apply for a building permit before water rights transfer completion and conveyance of water rights to the City if the City has accepted the water rights and a water right transfer application has been filed with the OSE. The applicant may obtain such a building permit only if escrow funds or an irrevocable letter of credit is provided

to the City in a manner acceptable to the City Attorney. The purpose of this provision is to secure the applicant's obligation to transfer water rights that can either be used for the City's water right permit compliance or diverted and delivered by the City water utility in such a manner that the development, based upon the approved development water budget, does not increase the demand on the City's water utility.

- 3.7.4** According to an agreement prepared by the City Attorney, the escrow funds or irrevocable letter of credit shall be in the amount of 100% of the current value of the water rights sought to be transferred by the applicant and shall be provided to the City Attorney at the time of building permit application. The City Attorney shall assure renewal of the letter of credit, if necessary.
- 3.7.5** The current value of the water rights shall be presumed to be the current fair market value of pre-1907 consumptive use water rights from the Middle Rio Grande Basin. The City shall have the sole discretion to determine the current value of the water rights, which determination shall be reasonably made based upon the known market for such rights and upon the purchase price of the water rights, as evidenced by the purchase agreement required in SFCC 25-12.4(D) (Section 3.3 of this document).
- 3.7.6** Upon completion of the water right transfer and issuance of the City's Water Rights Transfer Certificate as set forth in SFCC 25-12.10 (Section 3.9 of this document) for the full amount accepted by the City, the City shall release the irrevocable letter of credit. In the case of escrow, upon completion of the water right transfer of the full amount accepted by the City and issuance of the City's Water Rights Transfer Certificate as set forth in SFCC 25-12.10 (Section 3.9 of this document) the City shall return to the applicant the balance of escrow funds, as well as any accrued interest on this amount.
- 3.7.7** If the amount of water rights approved by the OSE for transfer is less than the amount of water rights accepted by the City, the applicant shall have 90 days from a final, non-appealable order within which to make up the difference by conveying to the City the balance of required water rights or water credit. If the applicant does not convey the required water rights or water credit within this time, the City shall transfer to the Water Division's operating budget a portion of the applicant's escrow fund or irrevocable letter of credit equal to the proportion of the water rights for which the OSE denied transfer. The transfer of the funds shall be in lieu of the requirement on the applicant to transfer any additional water rights. Upon such transfer of funds to the Water Division, the applicant will have fulfilled their requirement to transfer water rights and the City shall release the portion of the letter of credit or return to the applicant the portion of the escrow fund that represents the percentage of the accepted water rights required to be transferred for the development water budget as compared to the amount of water rights that were actually transferred to the City, less any unpaid transaction costs owed by the applicant, as well as any accrued interest on this amount. The Water Bank Administrator will then utilize the portion of the applicant's escrow fund or irrevocable letter of credit equal to the proportion of the water rights for which the OSE denied transfer to secure water credit in the City's Water Bank.

3.8 Office of State Engineer's Approval of the Water Right Transfer, Appeals, and Conveyance of Water Rights Title to City, SFCC 25-12.9

3.8.1 A water right transfer shall be deemed complete once the OSE has approved a transfer of all or a portion of the water right to the new point of diversion(s) and the new place and purpose of use and has issued a final permit for the transfer that is not appealed, or the permit is appealed but the permit becomes a non-appealable, final order by the OSE.

3.8.2 The City, as the lead applicant, shall have final decision-making authority regarding appealing any conditions of approval that affect Permit No. RG-20516 et al. unless the applicant or the City chooses to withdraw the application, and can do so in such a way that there will be no effect from the application process on Permit No. RG-20516 et al. The applicant shall have final decision-making authority regarding appealing any decisions affecting the validity and extent of the water rights being transferred. The party that decides to appeal shall pay the cost of the appeal.

3.8.3 If the application is denied and not appealed, then a new tender period shall commence.

3.8.4 When water rights are dedicated to a specific development water budget under SFCC 25-12.3(A) (Section 3.2 of this document), upon completion of the water right transfer, the applicant shall within 90 days, convey to the City all right, title and interest to the transferred water rights, at no additional cost, free and clear of all encumbrances and with special warranty covenants. Within this same 90 day period, the applicant shall execute and file all appropriate documentation with the Santa Fe County Clerk and with the OSE in order to effectuate timely issuance of the OSE final permit, pursuant to NMSA 1978, § 72-1-2.1. If the applicant fails to do so, the City shall disallow use of water from the City's system for the applicant's development unless the applicant has provided a letter of credit or escrow funds as set forth in SFCC 25-12.8 (Section 3.7 of this document) in which case the letter of credit or the escrow funds shall be retained by the City. The applicant shall reimburse the City for all water rights transfer application transaction costs borne under SFCC 25-12.6 (Section 3.5 of this document). Unpaid transaction costs shall be treated as utility charges as set forth in SFCC 15-1.4 and 15-1.5 (not included in this document).

3.8.5 When water rights have not been designated for a specific development water budget, upon completion of the water right transfer, the water rights shall be held as undesignated water rights in the Water Bank in the applicant's name. At such time as the water rights are designated for a specific development water budget, the applicant shall convey legal title to the City and file an appropriate change of ownership with the OSE and the Santa Fe County Clerk as required above.

3.9 Issuance of City of Santa Fe Water Rights Transfer Certificate, SFCC 25-12.10

Upon completion of the transfer of the water rights to the City's permit as set forth in SFCC 25-12.9 (Section 3.8 of this document) and issuance of the OSE's final permit, the Water Division shall deposit the water rights in the City Water Bank in the applicant's name and issue to the applicant a Water Rights Transfer Certificate evidencing the deposit. If the water rights were tendered for application to a specific development under

SFCC 25-12.3(A) (Section 3.2 of this document), that shall be indicated on the Water Rights Transfer Certificate and the Water Bank's records. Upon issuance of the Water Rights Transfer Certificate, the water rights transfer applicant shall then be referred to as the water rights transferor.

3.10 Water Rights Dedication to Obtain a Building Permit, SFCC 25-12.11

The water rights transferor or assigns may withdraw banked water rights from the Water Bank for dedication to a development water budget, as described in Section 1.5.3 of this document.

3.11 Sale of Water Rights, SFCC 25-12.12

At any time before or during the approval and transfer process, the applicant may sell and assign any or all of the applicant's interest in tendered water rights to the City or any other party, based upon a fair market price to be negotiated between applicant and the purchaser, providing the applicant notifies the City in writing of such a change in ownership. Sale and change of ownership of a water right tendered to the City for a particular project shall not change the designation of the water right for dedication to that development water budget, as specified in SFCC 25-12.3(A) (Section 3.2 of this document), without written City approval. A water rights transferor may sell or assign to another any or all of the transferor's water rights on deposit in the Water Bank that are not designated for a particular project. The Water Bank shall transfer the water rights to the account of the assignee.

Section 4 City Water Bank (SFCC 25-10)

4.1 Summary of the Water Bank

The City Water Bank consists of various public and private accounts holding water credit derived from water rights transferred to the City and from water conservation. All water credit, accounted for in consumptive use acre-feet per year, represent the amount of water the account holder is allowed to be served on an annual basis by the City's water system. In order to be served by the City's water system, an applicant must first dedicate water credit to meet their project's water budget using a Water Offset Assessment and Dedication Form (Section 1.5.3 of this document).

4.2 Water Bank Transactions, SFCC 25-10.3

4.2.1 The City Water Bank will be administered by the Water Division, which will be responsible for keeping all records, providing all necessary forms, and producing all necessary reports and receipts.

4.2.2 Consumptive use water rights, water credit and water conservation credit may be deposited into the City Water Bank by any of the following entities:

- a) The City, in order to hold consumptive use water rights derived from water rights purchases, leases and water conservation credit obtained from Retrofit Rebates and from donation from customers signing Conservation Contracts; and infrastructure projects allowing reuse of water and return flow credit;
- b) Water customers, in order to hold water conservation credit transferable within the City of Santa Fe's water system obtained through Water Conservation Contracts as set forth in the Water Conservation Credit Program (Section 2 of this document);
- c) Water Rights Transfer Program transferors, in order to hold water credit consisting of consumptive use water rights transferred to the City as set forth in SFCC 25-12 (Section 3 of this document) and pursuant to the OSE policies, guidelines and procedures which credit may be applied to new development projects requesting service from the City's water system.

4.2.3 Water rights deposits into the City Water Bank will be documented by the Water Right Transfer Certificate.

4.2.4 The deposit of water credit derived from a Conservation Contract into the Water Bank will be documented by the executed Conservation Contract.

4.2.5 The deposit of water credit derived from the Rebate Program into the Water Bank will be documented by the completed Rebate Application and Rebate Installation Verification Form.

4.2.6 All water rights, water credit and water conservation credit held in the City Water Bank shall be accounted for in units of acre feet per year.

4.2.7 Upon request of an entity in whose name water rights, water credit or water conservation water credit are on deposit in the City Water Bank, the Water Bank Administrator shall:

- a) transfer the water rights, water credit or water conservation credit to another entity as directed. Banked water credit or water conservation credit may be sold or assigned at any time by the owner, providing the owner notifies the City in writing of such a change in ownership. If the owner's assign does not have a Water Bank account established, the City shall establish a Water Bank account in the assign's name for the purpose of water credit or water conservation credit assignment;
- b) issue a Water Offset Assessment and Dedication Form that applies those water rights, water credit or water conservation credit to a specific development water budget, or
- c) issue a Water Offset Assessment and Dedication Form that applies the water rights, water credit s or water conservation credit to the public purpose as directed.
- d) deduct water credit from a Water Bank account documented on the Water Dedication Form, stating the account balance after dedication.

4.2.8 Water rights or water conservation credit in the Water Bank in the City's name account may be designated for specific purposes pursuant to resolution of the governing body adopted under the City water budget process and applied to that purpose by a Water Dedication Form.

4.2.9 If in the event the City no longer requires developers to offset the anticipated demand of their development project, water credit held by Water Rights Transfer Program transferor and water conservation credit held by water customers under the Water Conservation Credit Program in the City Water Bank can be sold to the City at current market value.

4.2.10 The Water Division Water Bank Administrator will manage the electronic software that records and processes all Water Bank transactions.

4.3 Water Bank Public Posting, SFCC 25-10.4

The Water Division shall post on the City's website a current public listing of the identity of each person or entity that holds water rights on deposit in the Water Bank that requests listing and the amount of water rights held by that person or entity.

Section 5 City Water Budget (SFCC 25-9)

5.1 Summary of City Water Budget Requirements

This Article describes the annual process which City water managers undertake to account for current and projected water supplies and demands. This Article also describe the process by which the governing body allocates available water made available from City water rights purchases, leases, and City conservation measures to meet its priorities, including affordable housing.

5.2 Water Budget Report, SFCC 25-9.5

On an annual basis, the Water Division will evaluate the City's total water system supply and total water system demand, effective for the twelve month period from April 1 to March 31. The Water Division will summarize this evaluation in the Water Budget Report and present the report to the Public Utility Committee at the regularly scheduled April meeting and to the Governing Body at the regularly scheduled May meeting. The report shall include:

- a) The City's current total water supplies, under the present water resource management policies, including:
 - i) Water rights available to the City;
 - ii) Long-term sustainable yield from those water rights;
 - iii) Effect that a range of drought conditions would have on that sustainable yield; and
 - iv) Wet water available that year;
- b) The total water demand including:
 - i) Actual demands upon the City's water service itemized into amounts to serve current customers, City uses, line loss and other actual current demands;
 - ii) Utility reserve;
 - iii) Anticipated demands upon the City's water service from future customers with valid written agreements that will require water service within the twelve month period;
 - iv) Special contractual demands (e.g. Las Campanas, County of Santa Fe); and
 - v) Non-revenue water demands including total system losses set out by categories of loss;
- c) Water system annual operating plan estimating water production from the City's various supplies to meet projected annual demand;
- d) Water resource annual management plan describing the impacts on the City's water resources resulting from the annual operating plan, as well as any planned actions to mitigate those impacts;

- e) 20-year supply-demand projection, including near- and long-term anticipated demands upon the City's water service based on current growth projections and anticipated demands of future customers with valid written agreements;
- f) The quantity of water, if any, by which the sustainable water supply exceeds committed demand;
- g) Status of the City's Water Conservation Credit Program and Water Rights Transfer Program; and
- h) Quantification of all water credit held in the City Water Bank, including water rights belonging to the City resulting from water rights purchases and leases, water conservation credit, water held for affordable housing, and water held to meet the anticipated long-range surface water supply gap resulting from water right permit offset requirements.

5.3 Allocation of City's Available Water, SFCC 25-9.6

5.3.1 Upon review of the Annual Water Budget, the Governing Body shall determine if water is available for allocation. Water available for allocation shall be derived only from the following sources:

- a) The portion of surplus sustainable water supply in excess of committed demand that the Governing Body has transferred to the City Water Bank;
- b) City's water rights purchases and leases deposited in the City Water Bank;
- c) Retrofit Rebate conservation credit deposited in the City Water Bank under the Water Conservation Credit Program as described in Section 2 of this document;
- d) Conservation credit donated to the City rebates under the Water Conservation Credit Program as described in Section 2 of this document;
- e) Infrastructure projects allowing reuse of water or return flow credit.

5.3.2 The water available for allocation by the City shall be held in the Water Bank in the City's name established as described in Section 4 of this document.

5.3.3 The Governing Body may allocate by resolution some or all of the water available for allocation to both City and other uses and projects that meet the City's priorities. In making allocations, the Governing Body shall give priority to the following uses:

- a) Affordable housing. Annual allocations of water to affordable housing shall be made for at least three consecutive future years, and each year's allocation shall be set aside in a separate affordable housing account in the City Water Bank. When a specific development receives final approval, the Water Division shall debit the appropriate year's affordable housing account in the City Water Bank for the water necessary to serve the affordable housing in the development and issue water allocation approval

for that project in the form of a memo signed by the City Attorney, which will be submitted the City Water Bank. At the time of each annual allocation, the Governing Body shall adjust allocations made in previous years to account for changes that may have occurred in previously identified affordable housing projects in the intervening year and return to the City's pool of available water any water that is not being used as a result of proposed affordable housing project's being withdrawn or a reduction in its anticipated water demand.

- b) Water from Retrofit Rebate conservation credit and water bank reserve in the City's name shall be allocated for sale to developers of small development projects. The City shall maintain in its Water Bank account a reserve of 25 AFY from Retrofit Rebate conservation credit for sale to water customers to remedy violations of restrictions under alternative development water budgets or Conservation Contracts.
- c) Water right permit offset requirements, accounted for in the long-range surface water supply gap account held in the City's Water Bank account;
- d) City projects including, but not limited to, parks and open space, affordable housing, water for the Santa Fe River, City buildings and other City facilities;
- e) Other projects in which the City is a partner; and
- f) Private or non-City public uses and projects which recognize other City priorities such as economic development and stability, energy efficiency, job growth and community health.

5.3.4 After the Governing Body has approved an annual water allocation for a specific project, as documented by the memo from the City Attorney, the Water Division shall debit the City's account in the Water Bank and credit a special account for that specific project. When the specific project is ready to obtain building permits, the developer shall withdraw the water credit from the special account, dedicate them to meet all or part of the approved development water budget for the development, as documented by a Water Offset Assessment and Dedication Form, and provide that Form to WBAO. That dedicated water shall become a permanent portion of total water system demand calculations unless it expires or is relinquished. Section 1.5.3 of this document describes the building permit process.

5.3.5 A water allocation by the Governing Body only satisfies a development water budget; it creates no other land use approvals or right to approval of the requested number of lots, units or commercial development, or commercial buildings, building permits or water meters for a proposed development project. The actual number of lots or units, or the amount and type of commercial development or the number of building permits or water meters that may be approved shall be determined by the appropriate development, permit or meter application review process.

5.3.6 A water allocation is issued for specific developments, building permits or water hook-ups and specific geographic sites and they shall not be moved, sold, traded, transferred or exchanged in any way for different developments, building permits or water hookups.

5.3.7 If not dedicated to an approved development plan or building permit within two years of the allocation approval, a water allocation shall revert back to the City's credit in the Water Bank. An applicant may reapply for the previously allocated water credit when the previously designated development project is ready to proceed to the appropriate stage in the development permitting process. An applicant may also relinquish allocated water credit at any time and the water credit shall revert back the City's credit held in the City's Water Bank.