

Items included in the “Code Change Options” list below would be new conservation code changes or programs and would be included in portfolios developed for future planning horizons.

<b>Code Change Options</b>		<b>Reference</b>	<b>Related Code*</b>
<b>Industrial, Commercial and Institutional</b>			
1	<p>City-owned and commercial (including those operated by HOAs) pools shall be equipped with re-circulating filtration equipment and shall submeter the make-up water by a date certain.</p> <p>Pools with capacity of 50,000 gallons of water or less shall use cartridge filter systems or regenerative coated media filters. The cartridges shall be the reusable type.</p> <p>In-ground pools with splash troughs shall drain back into the pool system.</p>		Water Conservation Code
2	<p>Commercial and multi-family facilities must have water efficient toilets, urinals, and bathroom faucet aerators.</p> <ul style="list-style-type: none"> <li>Flow rates must be no more than 1.28 gpf for toilets, 0.5 gpf for urinals, and 0.5 gpm and 0.25 gpm (metered) for public bathroom faucet aerators</li> <li>Options for implementation include upon resale or by a date certain and/or as a requirement to obtain a building or occupancy permit.</li> </ul>	WCTF IN-1 (2007); AWRPTF 3.1.2 Appendix C (2014)	Plumbing Code; Building & Fire Code
3	Dipper wells in commercial kitchens/restaurants shall be equipped with flow restrictors and shall have a flow rate no greater than 0.2 gpm.	CWCITF ICI – 3 (2010)	Plumbing Code
4	Owners of a commercial building and or city-owned building 10,000 square feet or larger are required to benchmark and report their water use rating to Austin Water by June 1st of each year. Reports may be submitted using EPA’s ENERGY STAR® Portfolio Manager. Commercial buildings are those that are used for civic, commercial, or industrial purposes other than manufacturing.		Energy Conservation Code
5	As of a date certain, the seller of a commercial property must provide a written disclosure to the buyer of any non-compliant water-using equipment or fixtures on the property.		Energy Conservation Code
<b>Outdoor Water Use</b>			
6	Require limitations on irrigated areas. Implementation options include:	a) CWCITF O-NC-5 (2010);	Land Development

	a) For new residential construction, limit irrigated area to not greater than 2.5 times the building footprint. b) For new residential and commercial construction, limit the area that may be irrigated with automatic irrigation systems.	AWRPTF Appendix C (2014)	Code
7	Require turf grass limit. Implementation options include: a) For new residential and commercial construction, limit the area that may be planted with turf grass. b) Remove requirement that turf grass landscapes be installed before a certificate of occupancy may be issued.	b) AWRPTF p.18 (2014)	Land Development Code Building & Fire Code
8	Require all commercial and multi-family facilities to install a separate irrigation meter. Currently, only new commercial and multifamily facilities since December 16, 1999 have this requirement (Water and Wastewater Design Criteria, Utilities Criteria Manual).		Land Development Code, Water and Wastewater Design Criteria, Utilities Criteria Manual
9	Explore opportunities to eliminate requirements for permanent automatic irrigation system installation for new commercial development.		Land Development Code
<b>Auxiliary Water</b>			
10	Require site plans for new development to include strategies for beneficial use of on-site sources of water and water reuse based on non-potable end use water demand.	CWCITF O-NC-4 (2010); Water Conservation Study, p.21 (Maddaus 2015)	Land Development Code
11	Require on-site reclaimed system technologies and the beneficial use of reclaimed water, including rainwater harvesting, condensate collection, foundation drain water, recycled process water, or cooling tower blowdown, or a combination thereof, for non-potable indoor use and landscape watering to be incorporated into the design and construction of each new building with a roof measuring at least 10,000 square feet and based on non-potable end use water demand. (This item is the regulatory version of auxiliary water incentive program items included later)	AWRPTF Appendix C (2014); WCS, p.21 (Maddaus 2015)	Building & Fire Code
12	Modify the current Rainwater Harvesting Rebate Program to encourage larger scale commercial systems and improve the utility's cost/benefit ratio.	WCS, p.21 (Maddaus 2015)	

\*Although code revisions may be proposed and adopted at any time, the Mechanical, Plumbing, Building & Fire, and Energy codes are generally on a 3-year revision cycle following changes to related uniform and international codes; next adoption of local code amendments is set for 2016. Land Development Code revisions are tied to the CodeNext effort with adoption tentatively planned for 2017-18. There is no set cycle for revisions to the Water Conservation Code, although revisions often coincide with the 5 year cycle for state requirements relating to water conservation plan updates, due next in 2019.

Items included in the “Incentive Program Options” list below would be new incentive programs and would be included in portfolios developed for future planning horizons.






<b>Incentive Program Options</b>		<b>Reference</b>
<b>Industrial, Commercial and Institutional</b>		
13	Offer a rebate for a high efficiency water broom that uses less than 1 gallon per minute.	
<b>Auxiliary Water</b>		
14	Offer an incentive to encourage the installation and use of gray water systems. These rebates could range from simple “laundry to landscape” systems, capturing untreated gray water from the bathroom lavatory sink, filtering and disinfecting it, and using it to flush a tank-type gravity-fed toilet, to large scale systems in new construction.	AWRPTF Appendix C (2014); Water Conservation Study, p.21 (Maddaus 2015)
<b>Indoor Water Use</b>		
15	Provide efficient toilet incentives. Options include: <ul style="list-style-type: none"> <li>• Provide a toilet retrofit rebate program for kits that retrofit an existing 1.6 gpf or greater toilet to a 1.28 gpf or less toilet.</li> <li>• Provide a toilet replacement rebate program for toilets that use on average more than 1.28 gpf (e.g. 0.8 gpf).</li> </ul>	AWRPTF Appendix C (2014)
<b>Outdoor Water Use</b>		
16	Offer a rebate to residential customers to permanently cap and/or remove their automatic irrigation systems.	AWRPTF 3.1.2 Appendix C (2014)
17	Provide a rebate to residential customers for a “smart” irrigation controller mobile app that can detect leaks and turn off fixtures, appliances and irrigation systems or automatically adjust irrigation schedules due to rainfall and soil moisture information.	CWC ITF O-EC-9 (2010)
18	Provide a rebate to residential customers for acoustic sensors to detect water leaks in irrigation systems. If the collected acoustic data is beyond the preprogrammed acceptable threshold, it would transmit this to the controller to shut off the system.	
19	Provide a rebate to residential and commercial customers for a “smart” irrigation spray valve that is installed in the base of each sprinkler head in a	WCTF OU-5 (2007)

	problem watering zone(s). Within each valve is a toggle that turns the valve on or off when triggered by water pressure. By installing some valves in the "on" position, and others in "off", the irrigation zone is effectively sub-divided into independent subzones. Then, using the "A" and "B" programs (found on most irrigation system controllers) property owners can adjust each subzone to function for a unique time period for areas with different watering needs due to vegetative type, soil depth or slope, or exposure to direct sunlight, thereby better managing total water use.	
<b>Other</b>		
20	Conduct an independent water savings assessment and cost/benefit analysis on whether to continue or modify the home water use reporting software program in advance of AMI implementation, including report delivery methods and in combination with and without "smart" meters, that may be provided at an additional service cost or incentivized until or if used in combination with Austin Water AMI that can provide customers near real time water use and analytical data displays for leak detection, comparisons with historical water use and similar and efficient households or facilities, and customer identification of water saving opportunities.	AWRPTF p. 14 (2014)
21	Explore ways that meter sizing and impact fees could potentially be a mechanism to incentivize reduction in water use.	

Items included in the "Options" list below would be new options and would be included in portfolios developed for future planning horizons.

<b>Other Options</b>		<b>Reference</b>
22	Implement Advanced Metering Infrastructure (AMI) <ul style="list-style-type: none"> <li>Consider implementing customer-facing program that provides near real time water use and analytical data displays for leak detection and customer identification of other water saving opportunities.</li> </ul>	AWRPTF Appendix C (2014) ; Water Conservation Study (Maddaus 2015)
23	New decentralized options – customer scale (such as rainwater harvesting and graywater reuse)	

Items included in the "planned" list below would likely be included in baseline portfolios and factored into baseline demand projections.

Planned Code Changes		Reference	Related Code*	Being considered during 2016 code revision cycle
<b>Industrial, Commercial and Institutional</b>				
24	Newly constructed commercial and multi-family facilities installing air conditioning systems with a combined cooling capacity equal to or greater than 100 tons shall have a single and independent condensate wastewater line to collect and use condensate wastewater for beneficial purposes beginning October 1, 2017.	AWRPTF Report, Section IV. 3.1.2, pg. 13; Section VI, pg.18, Appendix C, pp 1-2 (2014); WCTF Report IN-4 (2007); CWCITF Report O-NC-1, ICI-13 (2010)	Mechanical Code	
25	All cooling towers using potable water shall achieve a minimum of five cycles of concentration and have makeup and blowdown submeters, conductivity controller, drift eliminators and overflow alarms by January 1, 2018. Currently, only new and replacement cooling towers since January 1, 2008 are required to meet these efficiency standards and have this equipment.	WCTF IN-4 (2007); CWCITF ICI-1, ICI-3 (2010); AWRPTF Appendix C, p.2 (2014)	Mechanical Code; Plumbing Code	
26	All steam boilers shall be equipped with conductivity controllers to control blowdown, cold water make-up meters, and steam condensate return systems effective October 1, 2017.	WCTF IN 3 (2007)	Mechanical Code	
27	All toilets including dual flush toilets are required to have a maximum flow rate of 1.28 gpf, rather than an average flow rate of 1.28 gpf.		Plumbing Code	
28	Pre Rinse Spray valves may not use more than 1.28 gpm.	CWCITF ICI-3 (2010)	Plumbing Code	

Planned Other Strategy		Reference		
29	Leak detection and reduction Continue and enhance efforts to reduce leaks and system losses from Austin Water infrastructure	AWRPTF p. 14 (2014)		