



Water Conservation Update

Resource Management Commission
May 16, 2019

Mark Jordan
Environmental Conservation Program Manager
City of Austin | Austin Water



Task Force Letter to City Manager

April 1, 2019

Spencer Cronk, Austin City Manager

City of Austin
301 West 2nd Street
Austin, Texas 78701

Dear City Manager Cronk,

As members of the Water Forward Task Force, we are writing to you today to express our concern regarding the slow-moving implementation efforts related to various water conservation ordinance revisions that were identified as part of the recently adopted Water Forward Integrated Water Resource Plan (Plan). Specifically, our concern is focused on the following specific tasks:

- Expansion of Current Centralized Reclaimed Water Connection Requirements
- Dual Plumbing Ordinance Development
- Alternative Water Ordinance Development
- Development Focused Water Use Benchmarking and Budgeting
- Alternative Water Incentive
- Landscape Transformation Incentive
- Irrigation Transformation Incentive

As we discussed at our recent Water Forward Task Force meeting on March 12, 2019, we believe that these ordinance revisions can and should be developed over a much shorter time frame than what Austin Water proposed to the Task Force at our March 12th meeting.

Austin City Council unanimously adopted Water Forward in November 2018. At that time City Council directed that the ordinance revisions be accomplished on a faster timeline than that included in the draft plan. The Mayor's direction read, "The City Manager should expedite the timelines of all codes and ordinances recommended by Water Forward, where feasible, to increase the City's resilience to the next drought". The specific direction adopted by Council Members and the Mayor with respect to fast-tracking of these ordinances and incentives is included herein as an attachment. The urgency felt by City Council to implement these incentives and ordinances reflects the same sentiments as the Task Force itself.

To put the pace of Austin Water's proposed development of these ordinances and incentives into perspective, the nearest-term ordinance to be delivered is projected for late 2021 – early 2022, some three years from now. The incredibly important programs of benchmarking and budgeting remain a work in progress for another 13 years. In contrast, the billion-dollar investment that Austin Water made in the Proctor Water Treatment Plant and associated lines and tunnels was constructed in approximately five years.

Our concern is that with robust economic growth, development projects are moving through the system without these revised ordinances in place—meaning that every day, we are losing opportunities to save water, not only now, but for the life of these new building projects. After more than five years of planning, the City of Austin is no more resilient to extreme drought today than in 2014. Enhanced water

conservation and developing alternative water resources deliver an immediate return on our city's drought resilience and should not be delayed.

We would appreciate if the City of Austin would reassess this matter and determine how these ordinance revisions could be accomplished in a shorter time frame, with initial roll out in 12-18 months. May we offer the following suggestions:

- Consider outsourcing the ordinance revision and community outreach activities to consultants or other experts within the City that have special expertise in this work, to alleviate city resource limitations.
- Consider implementing an interim ordinance that could capture some of the larger development projects immediately.
- Establish a special working group, including members of the Task Force, to guide and propel this ordinance revision work forward.
- Provide regular reports to the Task Force with metrics on development projects and opportunities captured to advance water conservation and alternative water use.

Given the importance of this work, we are requesting that you, the City Manager, organize a special meeting of affected City Departments and Task Force Members to develop a new schedule and program to get these water conservation ordinances and incentives in place at an accelerated timeline.

Thank you for your consideration.



Sharlene Leurig



Bill Moriarty



Perry Lorenz



Jennifer Walker



Lauren Ross

CC: Greg Meszaros, Director Austin Water

CC: Mayor and City Council Members

City Manager Response to Task Force

From: Alexander, Jason
Sent: Tuesday, April 16, 2019 11:09 AM
To: leurig@texaswatertrade.org
Cc: Cronk, Spencer <Spencer.Cronk@austintexas.gov>; Meszaros, Greg <Greg.Meszaros@austintexas.gov>; lauren@glenrose.com; walkerj@nwf.org; Moriarty, William - BC <bc-William.Moriarty@austintexas.gov>; pl@perrylorenz.com
Subject: RE: Accelerating adoption of Water Forward

Ms. Leurig,

Good morning. I wanted to take a moment to acknowledge and respond to your email below on behalf of the City Manager. We very much appreciate your feedback below, and the collective efforts of those copied, for their work with the Task Force and toward advancing the Water Forward plan. As a result of this good work, the community now has a robust plan before it, and we are committed to identifying reasonable opportunities to expedite the timeline of implementation of codes and incentives to make the Water Forward strategies a reality. The City Manager has spoken with Director Meszaros of Austin Water and the Utility shares this commitment.

Water Forward is a highly ambitious 100-year plan that contains a transformative vision of Austin's water future. With this vision in mind, we will continue to create opportunities for substantial public engagement during the plan implementation, to enhance social equity and affordability outcomes. We remain dedicated to completing the stakeholder engagement on ordinance concepts, and to develop draft ordinance language based on that input, by the end of this calendar year. In addition, the Utility will actively work to find opportunities to accelerate the timeline of the other near-term Water Forward strategies and enhance our proactive engagement with new development to identify potential onsite reuse, reclaimed, conservation efficiency opportunities in advance of code adoption.

While we do seek to accelerate timelines, it is paramount that we also develop the appropriate direction and guidance to mitigate unintended consequences. The City Manager's Office will be working closely with Austin Water to this end. As you may know, Austin Water is now a direct report of the City Manager, and part of the Manager's executive team. This provides the Utility with direct access to all Assistant City Managers and helps ensure that the City's executive management will have appropriate visibility and opportunities to engage in plan implementation efforts. The City Manager has instructed Austin Water to assign appropriate resources to ordinance development and community outreach activities to achieve an accelerated timeline, and will continue to support those activities with City resources as necessary.

Again, we are committed to Water Forward's successful implementation and look forward to our continued collaboration with you in this effort. Please do not hesitate to reach out to me if I may be of further assistance.

Sincerely,

(moved City Council to bcc line)

Jason Alexander
Assistant to the City Manager
City of Austin, Office of the City Manager
512 974 2306 | Jason.Alexander@austintexas.gov
301 W. 2nd Street, 3rd Floor | Austin, TX 78701



Water Conservation Update

May 2, 2019 Council LDC direction

- 💧 To ensure that the Land Development Codes and permitting process are streamlined to the greatest extent possible upon adoption of any revision to the Land Development Code, ***the regulatory requirements adopted as part of Water Forward***, Austin's 100-year integrated water resource plan, ***that are related to the Land Development Code and are able to be accelerated and implemented this year*** should be codified and implemented as part of this comprehensive land development code revision process. Staff should report back at least on the following areas if not able to accelerate and implement this year, especially as concerns ***large buildings over 250,000 square feet: water benchmarking, dual plumbing, landscape transformation, and alternative water*** (emphasis added).

ALTERNATIVE WATER SOURCES

END USES

ROOF RUNOFF



BLACKWATER



GREYWATER



STORM WATER



COOLING
TOWERS



TOILET
FLUSHING



CLOTHES
WASHING



UNRESTRICTED
IRRIGATION



Current AW “touch points” for new development

- Ordinances
 - AC Condensate and Reclaimed Water connection requirements
 - Cooling tower blowdown reuse/alternative water make-up
 - Plumbing code plumbing fixture/irrigation system efficiency requirements
 - Mandatory Austin Energy Green Building Rating
- Planned Unit Developments
- Public Improvement Districts
- Municipal Utility Districts
- Master Development Agreements
 - Example: Mueller Redevelopment, McKalla Place
- Regulating Plans
 - South Central Waterfront
- City Property Repositioning Team
 - For Example: HEB, Home Depot
- Ch. 380 Agreements (Economic Development)
- Service Extension Request Applications (Conservation Checklist)
- Voluntary Austin Energy Green Building ratings

AW involvement in land development process

- AW Land Use Review Team
 - Visibility into all new cases that go through Development Services
 - Flag applicable requirements or reviews, such as requirements to connect to the reclaimed water system
- AW Utility Development Services review of Service Extension Requests
 - An SER is a request to extend City water or wastewater utility service to a tract of land, and is used to determine required infrastructure improvements and a preliminary estimate of the cost of infrastructure for proposed development
 - Many SER applications come in at the preliminary feasibility stage, which is often ahead of the DSD process
- AW Pipeline Engineering
 - Review design of relevant infrastructure included in subdivision/site plan cases

New Benchmarking/Alternative Water/ Dual Plumbing Options

💧 Recommended Option 1

- Phase 1 adopted this year within LDC timeframe
- New commercial development $\geq 250,000$ sq. ft.
- Must submit estimated water balance
- Using water “budgets,” staff reviews/recommends water efficiency, reuse, reclaimed, and alternative onsite water use measures
- Allows 18-24 months for staff to develop tools, cost estimates, rules and guidance documents for water treatment standards, monitoring, reporting, inspection and permit processing necessary for subsequent mandatory alternative water use

Benchmarking Option 1 (con't)

- **Phase 2 (adopted after initial 18-24 months)**
 - New commercial development \geq 250,000 sq. ft.
 - Must submit estimated water balance
 - Must meet non-potable water demands w/ available reclaimed or alternative water sources
 - Pay increase rate and meter fee if potable water use budget is exceeded
 - Dual plumbing required to meet alternative water requirement
 - Delayed effective date

Benchmarking Option 2

- ◆ In parallel with LDC timeline (adopted this year)
- ◆ New commercial development \geq 250,000 sq. ft.
- ◆ Must submit estimated water balance
- ◆ Must use centralized reclaimed and/or non-sewage based on-site water sources to meet certain non-potable water demands w/ available reclaimed or alternative water sources, with required potable water backup
- ◆ Pay increase rate and meter fee if potable water use budget is exceeded
- ◆ Dual plumbing required to meet alternative water requirement
- ◆ Delay effective date one year to allow development of tools, cost estimates, rules and guidance documents for water treatment standards, monitoring, reporting, inspection and permit processing necessary for mandatory alternative water use

Commercial Landscape

- Commercial landscape ordinance in Draft 3
 - Requires that at least 80% of new planting shall be native or adapted, drought tolerant species
 - Establishes Functional Green for sites with greater than 80% impervious cover

Description

(A) A functional green landscape provides a site with little to no landscape area or planting areas at ground level with green infrastructure that function equivalent to the ecosystem provided by a site that complies with landscape requirements.

Applicability

(B) A site that may exceed 80 percent impervious cover must meet functional green landscape requirements.

Requirements

(C) The Environmental Criteria Manual establishes the minimum requirements for functional green landscapes.

Commercial Landscapes – Functional Green

To calculate the Functional Green score, the total area of each landscape element is determined and then multiplied by an established factor. The weighted-area value of each landscape element is then summed and divided by the total area of the site.

$$\text{FUNCTIONAL GREEN SCORE} = \frac{\left(\begin{array}{l} \text{Area (sq. ft.)} \\ \text{of Landscape} \\ \text{Element A} \\ \times \text{Factor A} \end{array} + \begin{array}{l} \text{Area (sq. ft.)} \\ \text{of Landscape} \\ \text{Element B} \\ \times \text{Factor B} \end{array} + \begin{array}{l} \text{Area (sq. ft.)} \\ \text{of Landscape} \\ \text{Element C} \\ \times \text{Factor C} \end{array} \right)}{\text{Total Area (sq. ft.) of Site}^*}$$

* Landscape Elements integrated into the right-of-way can also be claimed for Functional Green credit; however, the right-of-way is not included in the total site area.

LANDSCAPE ELEMENTS		
PLANTED AREA		FACTOR
①	Existing Trees	0.8
②	Newly Planted Tree: Large	0.6
②	Newly Planted Tree: Medium	0.5
②	Newly Planted Tree: Small	0.4
③	Shrubs / Ornamental Grasses / Perennials	0.3
④	Ground Cover	0.2
SPECIALIZED MEDIA		
⑤	Extensive Green Roof	0.5
⑥	Intensive Green Roof	0.6
⑦	Rain Garden	0.3
ADDITIONAL ELEMENTS		
⑧	Porous Pavement	0.4
⑨	Vegetated Wall	0.5
⑩	Cistern	0.3
BONUS OPTIONS		
⑪	Auxiliary Water Irrigation	0.2
⑫	Pollinator Resource	0.1
⑬	Suspended Pavement System	0.2

Proposed WF/LDC Process Approach

May	June	July	August	September	October
<ul style="list-style-type: none"> -Continued informal engagement with stakeholders - AW staff: Continued refinement of code concepts, issues, decision points, potential code language pathways, and technical criteria concepts - Concurrent AW and multidepartmental review -May 28th – Task Force Meeting to discuss code concepts 	<ul style="list-style-type: none"> -Early to Mid June – Targeted Stakeholder Meetings - AW staff: Continued refinement of code concepts, issues, decision points, potential code language pathways, and technical criteria concepts - Concurrent AW and multidepartmental review -June 25th – Onsite Reuse Summit 	<ul style="list-style-type: none"> -Early to Mid July – Further Public Workshops, Charrettes - AW staff to continue code language development, refinement of technical criteria concepts, and identification of issues pending resolution -Concurrent AW and multidepartmental review -Late July – Develop RCA for TF, W/WW, RMC 	<ul style="list-style-type: none"> - AW staff to continue code language development, refinement of technical criteria concepts, and identification of issues pending resolution -Concurrent AW and multidepartmental review 	<ul style="list-style-type: none"> - TF, W/WW, RMC, Planning Commission, Environmental Board Action on RCA 	<ul style="list-style-type: none"> - Council action on LDC Revision Process

Other ordinances being considered

💧 Cooling Towers

- Administrative penalties for cooling tower efficiency standards, equipment, registration, and inspection requirements
- Non-compliant cooling towers ineligible for evaporative loss credit

💧 Plumbing Fixtures

- Review and, if necessary, revise plumbing fixture requirements in Plumbing Code based on 2019 EPA WaterSense performance criteria review (recommended)

💧 Residential Landscape

- Adopt residential landscape ordinance limiting turf grass and irrigation systems to 2.5 X building footprint or not more than 10,000 sq.ft., whatever is less and landscape may only include native drought tolerant plants on city's Preferred Plant list.

Rebate changes being considered

💧 **Alternative Water Incentives**

- Consolidate rebates for all alternative on-site sources into a single rebate program

💧 **Irrigation Efficiency Incentives**

- Water use monitoring/control devices and mobile apps
- EPA WaterSense certified WiFi smart irrigation controller
- Irrigation system audit rebate/coupon program
- Irrigation nozzle spray selector
- Timed drip irrigation system for hanging baskets and in commercial garden centers

Rebates (con't)

💧 **Landscape Transformation Incentives**

- Lower the turf grass requirement in current rebate to 50% (recommended)
- Implement a Waterwise Landscape program for commercial properties consistent with Commercial Landscape Ordinance
- Evaluate a Green Roof/Green Infrastructure rebate program that combines potable water offsets using onsite alternative sources with water quality goals



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