MEMORANDUM

TO: Mayor and Council Members

THROUGH: Robert Goode, P.E., Interim Assistant City Manager

FROM: Shay Ralls Roalson, P.E., Director, Austin Water

DATE: October 25, 2023

SUBJECT: Water Forward Land Development Code Amendments

This memo presents a report and possible actions for consideration relating to Water Forward Land Development Code amendments.

In 2018, Council adopted Austin's 100-year integrated water resource plan, Water Forward, which includes the development of new water supplies and an emphasis on water conservation and reuse. Requiring onsite water reuse and expanding the use of reclaimed water within new development projects are two strategies that build our resilience against drought and climate change by diversifying our water supply. These strategies will enable new developments to save an estimated 16 million gallons of potable water per day by 2040.

Prior Council Action

Council adopted Ordinance No. 20210930-117 to establish new requirements in the implementation of the Water Forward Plan, including Water Benchmarking, expanding the Reclaimed Water Connection Requirement, and requiring Onsite Water Resource System (OWRS) for large developments. These requirements were effective on December 1, 2021, with the exception of the following two components:

- New large development projects with a multifamily component that are more than 250 feet but less than 500 feet from a reclaimed water line were granted a variance from the requirement to connect to reclaimed water until December 1, 2023.

- The 2021 Land Development Code Amendments do not define what qualifies as an OWRS, and additional Land Development Code Amendments are needed to codify the requirements for OWRS. Council deferred the OWRS implementation date to December 1, 2023, to give staff time to develop the final set of regulatory requirements, evaluate potential impacts on housing affordability, and develop recommendations for offsetting affordability impacts.

Austin Water Analysis

Austin Water evaluated several potential reuse system strategies. The least costly strategies for the majority of multifamily housing units collect and treat rainwater and air conditioning condensate for irrigation, cooling, and toilet flushing. The report also identifies water utility cost offsets, co-benefits with other City sustainability initiatives, and qualified affordable housing projects that could be exempted from the requirements.

The Affordability Impact Statement, conducted by the Housing Department, indicates that the identified reclaimed water connection requirements and onsite water reuse requirements will increase the cost of certain large multifamily housing projects. However, these costs could be offset by other code amendments that the City has initiated. Additionally, developments may qualify for State or County programs, such as the Texas PACE Authority, that offer low interest loans for energy and water conservation.

Austin Water believes that this balanced approach of enacting the least costly onsite water reuse system strategies and exempting qualified affordable housing projects is consistent with Council's direction to become a more resilient community.

Recommendation for Council Consideration

To allow more time for consideration of the onsite water reuse system ordinance changes and to establish exemptions to the requirements for certain affordable housing projects, Austin Water recommends that the implementation of the reclaimed water connection requirement for developments with a multifamily component and requirements for OWRS be considered on March 7, 2024.

Therefore, Austin Water recommends the following Council actions to postpone the effective date:

- Amend Ordinance No. 20210930-117 to postpone the effective date for mandatory OWRS for large development projects. **November 9, 2023 Council Meeting**
- Conduct a public hearing and consider an ordinance to amend City Code Chapter 25-9 (Water and Wastewater) to extend the variance for reclaimed water connection requirements for large development projects with a multifamily component. Waive the requirement to go to Planning Commission for this item. **November 30, 2023 Council Meeting**

Austin Water further recommends the following Council actions to implement the final requirements for an OWRS and the expansion of the Reclaimed Water Connection mandate:

- Conduct a public hearing and consider an ordinance to amend City Code Chapter 25-9 (Water and Wastewater) to clarify requirements for water conservation in the implementation of the Water Forward plan. **March 7, 2024 Council Meeting**
- Amend City Code Chapter 15-13 (Regulation of Onsite Water Reuse Systems) to establish development project requirements for mandatory onsite water reuse systems and add clarifying language to onsite water reuse system regulations. **March 7, 2024 Council Meeting**

Additionally, Austin Water recommends continuing the existing incentive program:

- Reauthorize the Onsite Water Reuse System Pilot Incentive Program for Fiscal Year 2024 to encourage voluntary installation of these systems for housing projects that are exempt from these requirements. **March 7, 2024 Council Meeting**

If you have any questions, please contact Shay Ralls Roalson at 512-972-0108 or shay.roalson@austintexas.gov.

cc: Jesús Garza, Interim City Manager
Rosie Truelove, Director, Housing Department
Lauren Middleton-Pratt, Director, Planning Department

Attachments: Report on the Impact of Onsite Water Reuse System and Expanded Reclaimed Water Connection Requirements on Housing Affordability
Housing Department Affordability Impact Statement

Report on the Impact of Onsite Water Reuse System and Expanded Reclaimed Water Connection Requirements on Housing Affordability

Executive Summary

This report summarizes the impacts of the requirements for an Onsite Water Reuse System and the expansion of the Reclaimed Water Connection mandate on housing affordability as required by Ordinance No. 20210930-117 relating to Water Forward Land Development Code amendments.

Background

In 2018, Council adopted Austin's 100-year integrated water resource plan, Water Forward, which includes development of new water supplies as well as an emphasis on water conservation and water reuse. Requiring onsite water reuse and expanding use of reclaimed water within new development projects are two strategies that will build our resilience against drought and climate change by diversifying our water supply.

These strategies will enable new developments to conserve water on a large scale: by 2040 onsite water reuse will save an estimated 6 million gallons of potable water per day, and expanding the use of reclaimed water will save an estimated 10 million gallons per day.

Prior Council Action

Council adopted Ordinance No. 20210930-117 to establish new requirements in the implementation of the Water Forward Plan, which includes code requirements for Water Benchmarking, expanding the Reclaimed Water Connection Requirement, and Mandatory Onsite Water Reuse Systems (OWRS) for new development.

These requirements took effect on December 1, 2021. An overview of the code requirements currently in effect are:

Water Benchmarking

- Both small (<250,000 square feet) and large (≥250,000 square feet) developments requiring a site plan must submit a water benchmarking application.

Reclaimed Water Connections

- A small development project within 250 feet of a reclaimed water line shall connect and use reclaimed water for irrigation, cooling, and toilet flushing as identified in the water balance calculator.
- A large development project within 500 feet of a reclaimed water line shall connect and use reclaimed water for irrigation, cooling, and toilet flushing as identified in the water balance calculator.
- New large development projects with a multifamily component that are more than 250 feet from a reclaimed water line were granted a variance from the above requirement until December 1, 2023.

Onsite Water Reuse Systems

- A large development requiring a site plan shall establish an OWRS. This code change will take effect December 1, 2023.
- The 2021 Land Development Code Amendments do not define what qualifies as an OWRS. Council deferred the implementation date to give staff time to develop the final set of regulatory requirements. Additional Land Development Code Amendments are needed to codify the requirements for OWRS to avoid ambiguity when the requirement goes into effect.

The Ordinance also required staff to evaluate any impact these changes had on affordability and develop recommendations for offsetting impacts to housing affordability.

Staff Analysis

The report provides a detailed analysis of the costs of implementing water reuse strategies from the City's Water Forward Plan alongside the long-term benefits of reducing water bills, water supply costs, upfront infrastructure costs, and other relevant considerations.

OWRS Strategies Selected

Water reuse strategies provide non-potable water for non-potable water uses, such as irrigation, toilet flushing, and cooling. Austin Water evaluated several potential reuse system strategies. The least costly strategies collect and treat rainwater and condensate from air conditioning systems.

Implementation Costs and Benefits

Implementation costs include collection, storage, treatment, and dual plumbing for distribution of reuse water for non-potable uses. Ongoing costs include operations and maintenance costs as well as annual cross-connection and backflow prevention tests.

These costs are offset by reduced capital recovery fees, relief from submetering, lower fees due to smaller potable water meters, reduced volumetric water charges on monthly utility bills, and reduced stormwater pond volume. Other benefits include creating emergency water supplies for individual buildings that can be used to meet non-potable demands if there is a potable water outage.

Amortized Cost per Housing Unit

The proposed water reuse requirements for a new market-rate multifamily unit are estimated to add 0.02% to 1.4% ($800-$7,100) to the cost of each unit. Amortized over a 30-year period, this cost equates to between $(-)3 to $23/month per unit. These impacts could be offset by other code amendments that the City has initiated.

Exclusions for Affordable Housing

Austin Water proposes excluding housing projects from these water reuse requirements that meet the criteria of the State's Low Income Housing Tax Credit (LIHTC) program or the City's Affordability Unlocked program. Austin Water expects this to result in about three-quarters of income-restricted housing units not being required to implement reuse strategies. These developments are eligible to voluntarily implement water reuse systems aided by Austin Water's rebate programs.

Affordability Impact Statement

As required by Ordinance No. 20071129-100, the Housing Department conducted an Affordability Impact Statement (AIS) on the proposed new requirements to identify potential impacts on housing affordability. The AIS indicates that the proposed reclaimed water connection requirements and onsite water reuse requirements will increase the cost for certain large multifamily housing projects.

The AIS states "Housing staff acknowledge that failing to secure a resilient drinking water supply has its own long-term cost implications for marginalized Austinites, the local economy, and the housing market."

Alignment with Other Initiatives and Stakeholder Engagement

Onsite water reuse and reclaimed strategies align with other initiatives, including the Climate Equity Plan; the Imagine Austin Comprehensive Plan, including the Sustainably Manage Our Water Resources Priority Program; the Watershed Protection Strategic Plan; and the Council-approved 2018 Water Forward Plan.

Austin Water has worked with the Development Services Department, Watershed Protection Department and Austin Energy to align the water reuse requirements with other City sustainability initiatives, such as Green Building and Functional Green, to achieve co-benefits, and ultimately cost savings, to development projects through overlapping code requirements.

In addition to City programs, developments may qualify for State or County programs, such as the Texas PACE Authority program, which offers low interest loans for energy and water conservation in development projects.

Austin Water has provided a number of public outreach opportunities including launching a Speak Up Austin webpage as well as holding meetings with the Austin Contractors and Engineers Association, Real Estate Council of Austin, and Austin Housing Coalition.

Recommendations

Austin Water believes that this balanced approach of enacting the least costly onsite water reuse system strategies and exempting qualified affordable housing projects is consistent with Council's direction to become a more resilient community.

The steps that will be required to implement the final requirements for an Onsite Water Reuse System and the expansion of the Reclaimed Water Connection mandate are as follows:

- Conduct a public hearing and consider an ordinance to amend City Code Chapter 25-9 (Water and Wastewater) to clarify requirements for water conservation in the implementation of the Water Forward plan.
- Amend City Code Chapter 15-13 (Regulation of Onsite Water Reuse Systems) to establish development project requirements for mandatory onsite water reuse systems and add clarifying language to onsite water reuse system regulations.

Additionally, Austin Water recommends continuing the existing incentive program:

- Reauthorize the Onsite Water Reuse System Pilot Incentive Program for Fiscal Year 2024 to encourage voluntary installation of these systems for housing projects that are exempt from these requirements.

Report on the Impact of **Onsite Water Reuse System** and Expanded **Reclaimed Water** Connection Requirements on Housing Affordability

Austin Water

September 19, 2023

This report summarizes the impacts of the 2021 Land Development Code requirements for an Onsite Water Reuse System and of the expansion of the current Reclaimed Water Connection mandate on housing affordability as required by PART 8 of Council **Ordinance No. 20210930-117** regarding new requirements for conservation to implement the Water Forward Plan. It also proposes possible actions for Council consideration concerning these impacts.

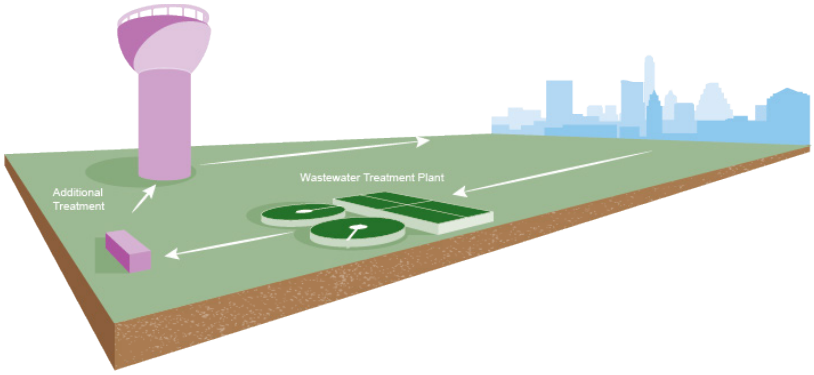
Background on the Requirements

In 2018 Council adopted Austin's 100-year integrated water resource plan, Water Forward. The plan was developed to ensure Austin would have a reliable and sustainable water supply to meet the growing demands for new housing and businesses in the face of a changing climate where more frequent and longer drought periods are anticipated. Water Forward recommendations include development of new water supplies with an emphasis on water conservation and water reuse. Requiring onsite water reuse and expanding use of reclaimed water within new development projects are two of the multiple strategies recommended in the Water Forward Plan that will help our community build resiliency to the effects of climate change by diversifying our water supply.

Since June of 2019, Austin Water (AW) has been developing the Water Forward reuse ordinances for both reclaimed water connection requirements and onsite water reuse requirements with continuous input from community stakeholders. In general, AW has taken a phased approach to these requirements to allow time for the development community to adequately prepare for them. As specified by the Land Development Code amendments adopted in 2021, these requirements will only apply to **Large Development Projects** (multifamily, commercial, or mixed use development projects that have at least 250,000 square feet of gross floor area). One- and two-family dwelling condo regimes do not fall into this definition of a Large Development Project.

Reclaimed Water Connection Requirements

Austin has had reclaimed water connection requirements in place since 2012. Below is a description of how the requirements were expanded with the 2021 Land Development Code Amendments for Large Development Projects.



2012 ordinance

All commercial and multi-family projects within 250 feet of a reclaimed main must connect and use reclaimed water for irrigation, toilet flushing, cooling. Variances allowed for financial hardship.

2021 ordinance

Large Development Projects within 500 feet of a reclaimed main must connect and use reclaimed water for irrigation, toilet flushing, cooling. Variances allowed for projects with multi-family components until Dec. 1, 2023.

Onsite Water Reuse System Requirements

Below is a description of how the onsite water reuse system (OWRS) requirements have been phased for implementation for Large Development Projects.

Phase I went into effect December 2020

Voluntary* OWRS Program

- New OWRS regulations in Title 15 (Utility Regulations) for the design, permitting and operation and maintenance of multifamily & commercial systems
- Pilot incentive offered for voluntary adoption of OWRS to test out the new regulatory framework

*Mandatory for projects with cooling towers

Phase 2 to take effect December 2023

Mandatory OWRS Program

- Mandatory installation of OWRS for commercial and multi-family developments ≥250,000 sq. ft. in Title 25 (Land Development Code)
- New regulations on the applicability for the mandate along with provisions for enforcing the mandate

Note that the 2021 Land Development Code Amendments only require Large Development Projects to install an onsite water reuse system beginning December 1, 2023. **Chapter 15-13** of City Code is being proposed to be amended to include the final regulatory requirements as shown below:

Large Development Type	Required Alternative Water Sources	Required Non-potable Uses
Commercial, Multifamily and Mixed Use	Rainwater and A/C Condensate	Toilet/Urinal Flushing Irrigation, Cooling, Clothes Washing
Suburban Multifamily	Rainwater and A/C Condensate	Irrigation

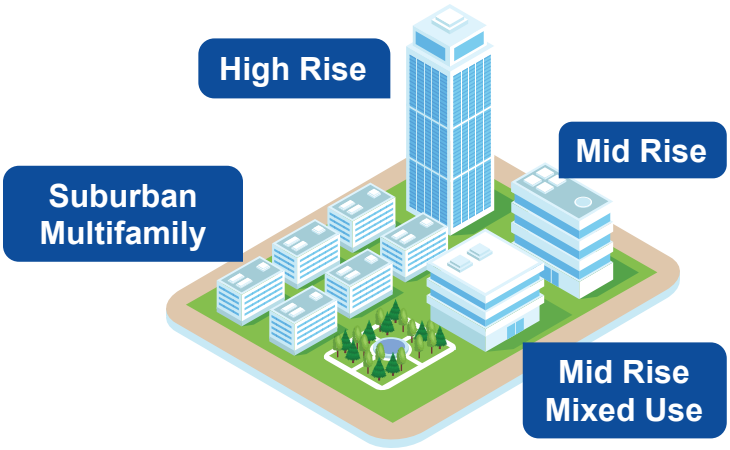
Assessment of Impacts from Requirements on Housing Affordability

The reclaimed water connection requirements and onsite water reuse requirements will have impacts on the cost of housing, which will vary depending on the scale, type, and location of the project. However, the Water Forward plan was adopted with the assumption that there would be additional costs borne by the community to implement these water management strategies. As shown in the table from the Water Forward plan below, rainwater harvesting and air conditioning (AC) condensate reuse systems are the least expensive onsite water reuse systems to implement, while reclaimed water is the least expensive reuse strategy. Large Development Projects within 500 feet of a reclaimed water main will not have to install an onsite water reuse system if reclaimed water is used to meet the non-potable demands for the development.

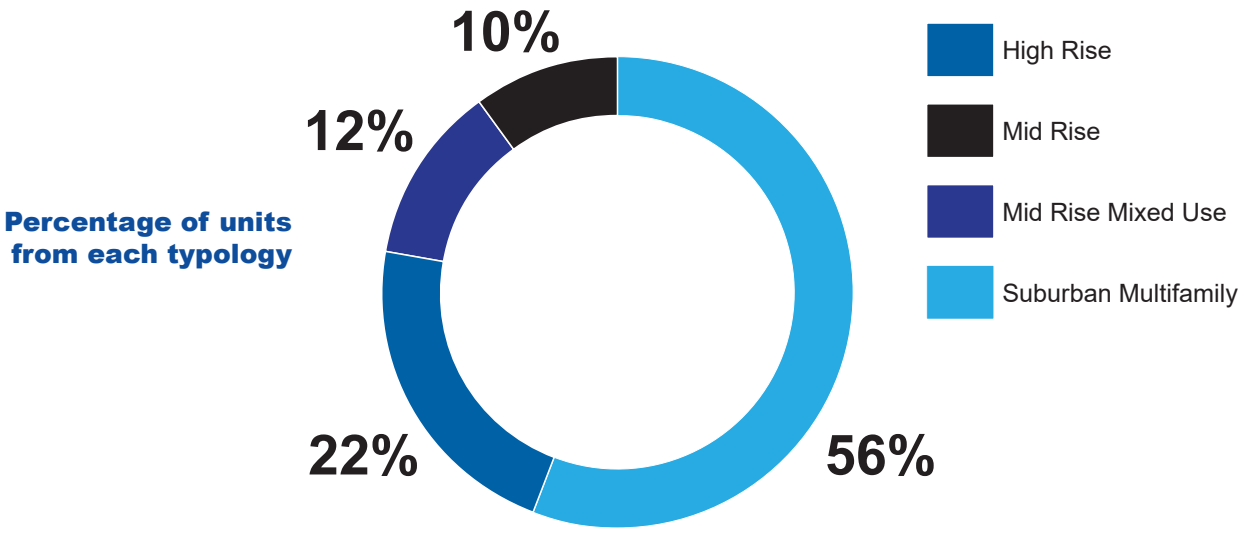
Water Management Strategy		2040 Target in AFY	2040 Target in MGD	Annual Community Unit Cost per AF of Savings
Alternative Water Ordinances and Incentives	Lot Scale Stormwater Harvesting	330	0.29	$5,510-$5,062
	Lot Scale Rainwater Harvesting	1,550	1.38	$2,619-$2,960
	Lot Scale Graywater Harvesting	2,130	1.90	$3,898-$10,666
	Building Scale Wastewater Reuse	1,320	1.18	$12,692
	Air Conditioning Condensate Reuse	1,080	0.96	$2,702
	Total	**6,410**	**5.72**	**$2, 702-$12,692**
Expanded Reclaimed Water System Connection Requirements		12,000	10.7	$1,229

AFY = Acre-feet per year • MGD = Million gallons per day • AF = Acre-feet

During the development of these ordinances, staff has prioritized balancing the water supply benefit of the new requirements with the impacts on housing affordability. The cost impact of onsite water reuse and reclaimed water use can vary based on the footprint, height, floor layout and amenities provided in different type of housing developments. Staff categorized typical Large Development Projects with housing units seen in the city into four typologies shown below. Upfront and ongoing costs and savings from meeting the proposed requirements were assessed for each building typology for this report. The cost estimates rely on multiple consultant studies finalized within the past six months, data from local and national reuse projects, and staff calculations using current fee and rate schedules.



Recent City site development data (December 1, 2021 to May 2023) shows the breakdown of housing units that fall into each of the four typologies of Large Development Projects.



Impact on market rate development costs & housing

Net impact of onsite water reuse requirement

Upfront costs and offsets of onsite water reuse systems

Onsite water reuse requirements only apply to new developments with 250,000 square feet or more of gross floor area. The largest upfront cost components of an onsite water reuse system are:

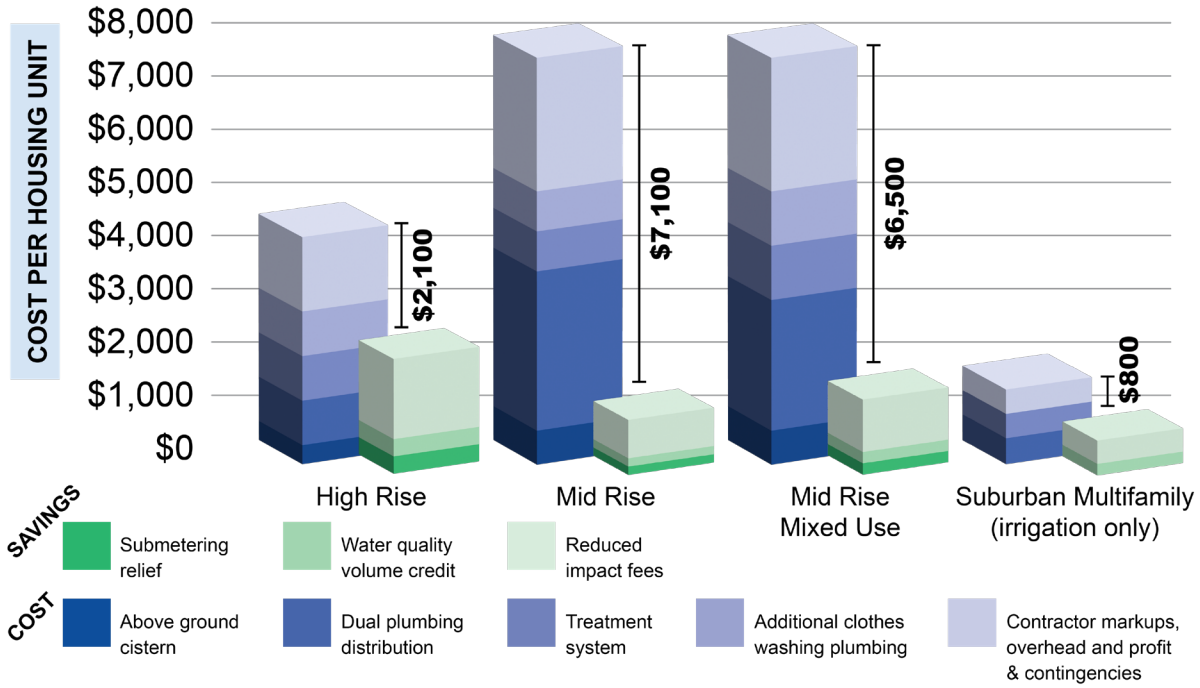
- Collection cistern: collection cistern costs are correlated with size, which will vary based on roof area of the development;
- Treatment processes: required treatment for rainwater and A/C condensate reuse includes filtration and disinfection processes; and
- Dual plumbing: additional plumbing needed to run non-potable supply to the required fixtures.

These costs are offset by the savings a development realizes from the following:

- Reduced capital recovery fees: For developments with an onsite water reuse system, water and wastewater connection fees are lower due to the reduced reliance on the City's centralized water and wastewater infrastructure;
- Relief from submetering: AW has worked with the Development Services Dept. to amend the City's plumbing code to remove the requirement to submeter water use of individual apartments when non-potable water is supplied to the building; and
- Reduced stormwater quality control pond volume: AW is currently working with the Watershed Protection Dept. to amend the City's Environmental Criteria Manual (ECM) to allow stormwater quality control ponds to be smaller when rainwater is captured from buildings and reused in the development instead of adding to the stormwater runoff from the property.

A summary of the net capital cost impact per housing unit within the four typologies can be seen below.

Capital Costs and Savings for Rainwater + AC Onsite Water Reuse Systems for Residential Building Typologies - Per Housing Unit



As shown in the chart, the net impact on the cost of development is highly influenced by the cost of dual supply plumbing. The Suburban Multifamily typology which makes up the biggest portion of new housing supply from Large Development Projects experiences the least cost impact due to not needing to dual plumb within buildings. For High Rise buildings, the stacked nature of utilities results in a much smaller cost impact compared to the Mid Rise buildings that will be required to install dual plumbing.

Added construction costs are often passed on to homebuyers. The table below shows that added cost of development from onsite reuse systems is less than 0.5% of Austin's typical sales price for High Rise units and less than 1.5% of typical sales price for Mid Rise units.

Housing typology	Neighborhood	Built in	Sq ft	Sale price	OWRS added cost	OWRS cost as percentage of sale price
High Rise	Downtown	2019	618	$550,000	$2,100	0.38%
High Rise	Downtown	2018	999	$950,000	$2,100	0.22%
High Rise	Downtown	2022	3,234	$4,990,000	$2,100	0.04%
Mid Rise	S. Congress	2023	973	$699,000	$7,100	1.02%
Mid Rise	S. Congress	2021	1,225	$599,950	$7,100	1.18%
Mid Rise	S. Congress	2023	811	$499,000	$7,100	1.42%

Ongoing costs and offsets of onsite water reuse systems

Proper operation and maintenance of onsite water reuse systems is necessary for sanitation and to protect public health. This means there will be added ongoing costs to developments from operations and maintenance of the treatment systems and from annual cross connection and backflow prevention tests. Ongoing costs are offset by ongoing savings of smaller meter charges from smaller potable meters and reduced volumetric water charges on monthly utility bills.

The table below shows the net impact of both the upfront and ongoing costs and offsets over a 30-year period summarized in net present value and approximated to monthly impact per unit for each of the four housing typologies.

Additional Monthly Cost Per Unit of Housing Using a 30 Year Net Present Value				
	High Rise	**Mid Rise**	**Mid Rise Mixed Use**	**Suburban Multifamily**
RW + AC	$8	$23	$22	$3

RW = Rainwater • AC = air conditioning condensate

Suburban Multifamily and High Rises, which make up about 78% of the new housing units from Large Development Projects, see an addition of $3-8 on the monthly cost, an addition of less than 0.5% to monthly rents as seen in the table below. Mid Rise buildings see an addition of $22-23 per unit per month, which is less than 1.5% of current monthly rent in these typologies.

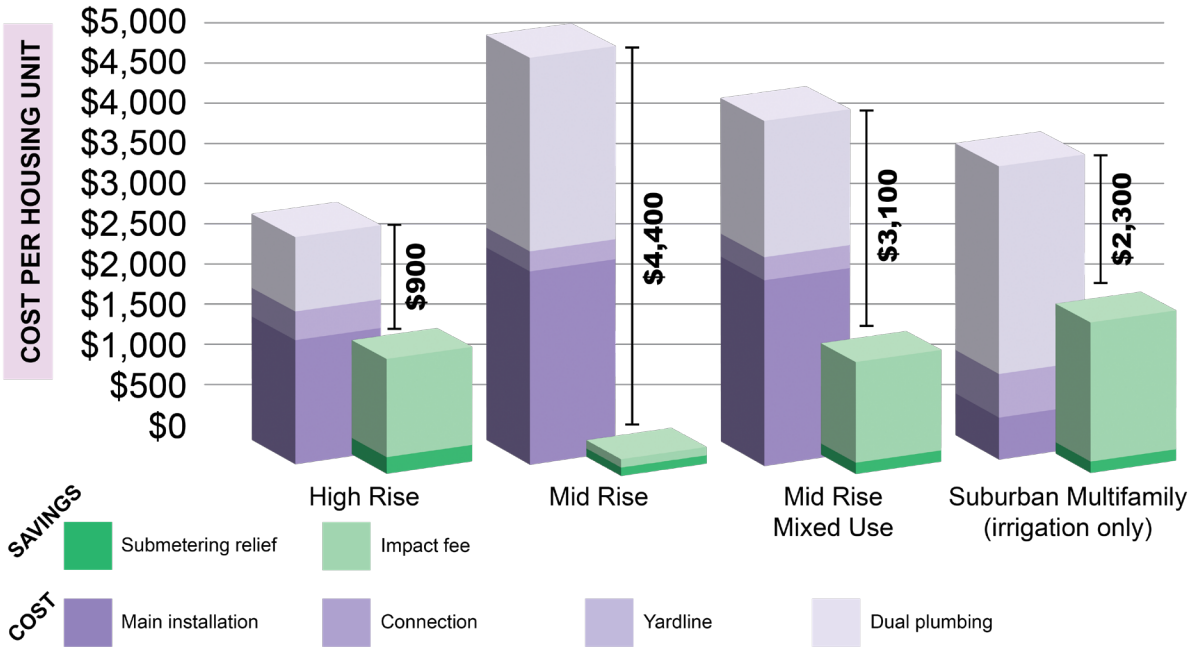
Housing typology	Neighborhood	Average apartment rent	OWRS added cost	% added OWRS cost
Suburban Multifamily	Pilot Knob	$1,554	$3	0.19%
High Rise	Downtown	$3,152	$8	0.25%
Mid Rise	South Congress	$1,985	$23	1.16%

Net impact of expanded reclaimed water connection requirement

Upfront costs and offsets of reclaimed water connections

The reclaimed water connection expansion requires Large Development Projects within 500 feet of a reclaimed water line to connect to and use reclaimed water for non-potable demands like toilet flushing, irrigation and cooling. Typical upfront costs for these projects include the cost to extend the reclaimed water main to the property and the cost to dual plumb the buildings for non-potable supply to the required fixtures. These costs are offset by the savings a development realizes from reduced water and wastewater impact fees and from relief from submetering water used in individual apartments. For developments using reclaimed water for non-potable demands impact fees are lower due to the reduced reliance on the City's centralized water infrastructure.

Capital Costs and Savings for Expanded Reclaimed Requirement for Residential Building Typologies - Per Housing Unit



A summary of the upfront cost impact per housing unit for the four typologies can be seen below.

The chart assumes a development at the maximum connection distance of 500 feet and therefore reflects the maximum cost impact from the new requirement. Developments closer to the reclaimed main would spend less than shown to extend the main to their property, resulting in a smaller net impact.

With the exception of multifamily suburban developments, the upfront cost to connect to the City's reclaimed water system is less expensive than installing an onsite water reuse system for Large Development Projects. High Rise buildings experience the least cost per unit for the four typologies owing to the efficient stacked plumbing systems of those buildings.

Added construction costs are often passed on to homebuyers. The table below shows that added cost of development from the expanded reclaimed connection requirements is less than 0.2% of Austin's typical sales price for High Rise units and less than 1% of sales price for Mid Rise units.

Housing typology	Neighborhood	Built in	Sq ft	Sale price	Reclaimed added cost	Reclaimed cost as percentage of sale price
High Rise	Downtown	2019	618	$550,000	$900	0.16%
High Rise	Downtown	2018	999	$950,000	$900	0.09%
High Rise	Downtown	2022	3,234	$4,990,000	$900	0.02%
Mid Rise	S. Congress	2023	973	$699,000	$4,400	0.63%
Mid Rise	S. Congress	2021	1,225	$599,950	$4,400	0.73%
Mid Rise	S. Congress	2023	811	$499,000	$4,400	0.88%

Ongoing costs and offsets from reclaimed water connections

Ongoing costs to developments connecting to the City's reclaimed water system include annual cross connection and backflow prevention tests. Ongoing costs are offset from ongoing savings by smaller meter charges for potable meters and reduced volumetric water charges on monthly utility bills.

The table below shows the net impact of both the upfront and ongoing costs and offsets over a 30-year period summarized in net present value and approximated to monthly impact per unit.

Additional Monthly Cost Per Unit of Housing Using a 30 Year Net Present Value				
	High Rise	**Mid Rise**	**Mid Rise Mixed Use**	**Suburban Multifamily**
Reclaimed 251-500'	-$3 to -$1	$8 to $10	$0 to $4	$4 to $5

RW = Rainwater • AC = air conditioning condensate

High Rises can save money in the long run when they connect to the City's reclaimed water system even if they are the maximum distance of 500 feet away from a reclaimed water main. For most developments the increase in monthly rent is less than 0.5%.

Housing typology	Neighborhood	Average apartment rent	Reclaimed added cost	% added Reclaimed cost
Suburban Multifamily	Pilot Knob	$1,554	$5	0.32%
High Rise	Downtown	$3,152	-$1	-0.03%
Mid Rise	South Congress	$1,985	$10	0.50%

Impact on income-restricted affordable housing

Income-restricted affordable housing exemptions

While ensuring a sustainable water supply is critical for Austin's continued growth, affordable housing is also necessary. Including exemptions to the onsite water reuse and reclaimed water connection requirements for certain affordable housing developments would ensure that sustainable water supplies would not come at the expense of providing affordable housing for the City.

Staff looked to existing housing affordability programs within the City and their definitions of qualifying affordable housing to arrive at a proposed definition for exempting developments from the onsite water reuse system and reclaimed water connection requirements. Using a definition of an existing program will allow the development review process to be streamlined for these projects without adding review time or staff resources. The definition of qualifying affordable developments in SMART housing and Affordability Unlocked were considered. In the SMART program the affordability period for owner occupied housing is only 1 year, and that of renter housing is only 5 years. The onsite water reuse and reclaimed water systems being put in place will conserve water in these developments for at least 30 years, if not more. To exempt such projects would mean as a City we get an affordable unit for 1 to 5 years and lose out on 30 years of water conservation. In contrast, Affordability Unlocked has 99 years and 40 years affordability period requirements, contributing to more long-term affordable housing stock.

The minimum percentage of units in a development that must be affordable to qualify for SMART housing is 10% of the total units. The water reuse requirements will apply to all units in the building. If we exempt SMART housing certified projects 90% of those units will not contribute to building an affordable housing stock, nor conserve water. In contrast Affordability Unlocked requires at least 50% of units to be affordable. Additionally, the State's Low Income Housing Tax Credit (LIHTC) program also generates developments that produce deep affordability for long term periods similar to Affordability Unlocked. For these reasons, staff is recommending exempting Large Development Projects that meet the criteria of affordable development in the Affordability Unlocked program or LIHTC from both the onsite water reuse system and reclaimed water connection requirements.

Looking at the total number of income-restricted affordable housing units generated by various City programs since 2019, about 73% of those units would potentially not be impacted by the water reuse requirements either due to the size of the development or due to the proposed exemptions (see table below).

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Since 2019/ start of Affordability Unlocked	No. of Units	%
Total income-restricted affordable units from all programs	13,604	
Total affordable units in small developments not subject to mandate	4,145	30%
Total affordable units in large developments exempt from mandate	5,794	43%
Total affordable units not affected by or exempt from mandate	9,939	73%

It should be noted that Austin Water incentives for both onsite water reuse systems (up to $500k per system) and reclaimed water use (up to $100k per project) will be available to exempt projects choosing to participate in water reuse programs (subject to funding approval by Council).

Looking at the remaining 27% of the income-restricted affordable housing stock from City programs, most of these units are from Large Development Projects participating in various density programs, or the affordable housing is required by Development Agreements or PUD Agreements in exchange for other development entitlements. These developments typically have 20% or fewer affordable units and face similar challenges discussed above, where 80-95% of the units will not be affordable for income restricted families nor will contribute to the City's water reuse goals.

Impact on existing affordable housing

The onsite water reuse system and reclaimed water connection requirements will only apply to new development and do not affect the existing affordable housing stock nor strategies that preserve existing affordable housing stock. At the same time, existing development and housing stock will benefit from the increased resiliency of Austin's water supply and diversification of water supply from onsite water reuse systems and reclaimed water use.

Other cost offsets and financing options for water reuse systems

The onsite water reuse system and reclaimed water connection requirements have been designed to align with other City sustainability requirements like the recently updated Austin Energy Green Building ratings and the proposed Functional Green requirements. Installing a water reuse or reclaimed water system within a project's buildings or landscape will count towards meeting the requirements of these other programs. The cost savings from alignment with the City's other sustainability requirements are difficult to quantify but would be expected to have a positive cost impact on developments.

In addition to City programs, developments required to install onsite water reuse and reclaimed water systems can also qualify for State or County programs like PACE financing which offers low interest loans for energy and water conservation in development projects, making these projects cost neutral. AW participated in a **study** that found PACE financing is a viable tool for water reuse when combined with energy efficiency measures.

Other benefits and cost savings from Water Forward implementation

The benefits of ensuring the City has a resilient and sustainable water supply are summarized below. Note that other cities in the Southwest like **Phoenix** are currently experiencing water shortages that will block future growth.

- **Long-term water supply sustainability and affordability**
  - Strategies like conservation and reuse are incremental strategies to achieve long term savings goals and defer bringing on additional water supplies as well as potential costs associated with those supplies.
  - Conservation and reuse savings can stretch our existing water supplies, including during drought situations, and can also defer implementation of much more expensive emergency water supply strategies.
- **Local economic impacts**
  - Defer drought/emergency water supply events that can impact the local economy.
  - Maintain desirability for new businesses looking to establish roots and create jobs in Austin.
  - Operation and maintenance of water reuse systems creates new industry and workforce opportunities for local residents.
- **Protecting public health**
  - Conserving and maintaining reliable water supplies helps protect public health and availability of clean, safe drinking water for customers, including during drought or other emergency events.
  - Low-income communities can experience greater burdens from lack of potable water supplies. Conservation and reuse strategies seek to stretch our potable supplies and mitigate potential burdens on low-income communities.
- **Creating emergency water supplies within buildings**
  - Onsite water reuse systems and reclaimed water systems create emergency water supplies for individual buildings that can be used to meet non-potable demands including toilet and urinal flushing if there is a potable water system outage.
- **Alignment with other City plans**
  - Onsite water reuse and reclaimed strategies align with and help to reach the water goals in the Climate Equity Plan, the Imagine Austin Comprehensive Plan, Sustainably Manage Our Water Resources Priority Program, the Watershed Protection Strategic Plans, and the Council-approved 2018 Water Forward plan.

Effect on development capacity from new regulations and permitting requirements

With the phased implementation approach for these reuse requirements, staff has had three years to establish programmatic elements to ensure that Large Development Projects will not experience substantially increased time for permitting or site plan review due to the new requirements. These include: establishing a new program within AW that consists of two engineers and three environmental program coordinators to oversee administration of the new regulations; adopting a new regulatory framework to streamline permitting of onsite water reuse systems in 2020; updating the City's Utility Criteria Manual to include reclaimed water system design specifications; publishing permitting and design guidance and manuals for onsite water reuse and reclaimed water systems on the AW webpage; and meeting continuously with the Development Services Dept., Watershed Protection Dept., and Austin Energy to coordinate development review processes that overlap with the new regulations.

Effect on development capacity and potential offsets for development capacity

This report has so far evaluated cost offsets to developments that are realized due to implementing water reuse requirements. In addition, Council is considering other code amendments that can potentially increase development capacity of projects. Staff analyzed three specific projects recently constructed in Austin, for scale of reduced development capacity due to onsite water reuse and reclaimed water connection requirements alongside increased development capacity from zoning entitlements including eliminating parking minimums and waiving compatibility. None of the three projects triggered compatibility, but the High Rise project was in the downtown area where the absence of height restriction resulted in unused development capacity. Assuming the market would provide 80% of the current minimum parking required, the Mid Rise and Suburban Multifamily typologies also showed adequate increase in development capacity.

While further comprehensive analysis would be needed to fully understand the impact of these other code amendments, preliminary analysis show that relaxed height restrictions and removing minimum parking requirements more than offset the reduced development capacity from the new water reuse requirements as shown in the table below.

	High Rise	Mid Rise	Suburban Multifamily
Total added cost to construction from an onsite water reuse system	$464,100	$1,597,500	$456,000
(-) impact on development capacity in units from an onsite water reuse system	-2 units	-7 units	-2 units
Total added cost to construction from expanded reclaimed connection	$198,900	$990,000	$1,311,000
(-) impact on development capacity in units from expanded reclaimed connection	-1 unit	-4 units	-6 units
Added development capacity from removing minimum parking requirements	-	30,674 sq ft	77,081 sq ft
Added development capacity from existing unused entitlements	58,875 sq ft	-	-
Added development capacity from removing compatibility citywide	Did not trigger	Did not trigger	Did not trigger
(+) impact on development capacity in units	+74 units	+38 units	+96 units

This table assumes $250,000 per unit in construction cost for an 800 sq. ft. unit

Conclusions and Recommendations

The onsite water reuse system and expanded reclaimed water connection requirements will have near-term impacts to multifamily housing costs that will likely range from .02 to 1.4% (or $800-$7,100 per unit) depending on development type and style. However, water reuse strategies from the Water Forward plan are incremental strategies to achieve long term savings goals that will defer the cost of bringing on additional water supplies that may be more expensive in the future.

The added cost to Large Development Projects has been minimized by designing the requirement for onsite water reuse systems to capture rainwater and AC condensate, or to instead use reclaimed water where available for non-potable uses within buildings. The costs of these water reuse requirements have further been mitigated by designing overlapping requirements with other City sustainability programs such as the Austin Energy Green Building program dual plumbing requirement and the proposed Functional Green elements for landscaping. In addition, AW has worked with the Development Services Dept. to ensure the water reuse requirements are in alignment with the City's plumbing and mechanical codes and that no conflicts exist. Lastly, AW has worked with the Watershed Protection Dept. to develop new criteria for rainwater harvesting systems that results in cost savings from a reduced stormwater control volume size. This criteria will be published as official guidance in October of this year and is proposed to be included as an amendment to the City's Environmental Criteria Manual.

The PACE program has been shown to be an effective financing tool to make these water reuse systems cost neutral when a Large Development Project is also able to incorporate energy efficiency measures such as solar power systems into buildings. While no development projects have utilized PACE financing for water reuse in Texas to date, the concept has been validated through a joint effort by AW, the Texas PACE Authority, Texas Water Trade, and the National Wildlife Federation.

Staff is recommending code changes to exempt Large Development Projects that qualify as affordable developments under the Affordability Unlocked program or the State's Low Income Housing Tax Credit program from the water reuse requirements. This would likely result in about three quarters of income-restricted housing units not having to bear additional costs to achieve the City's water supply and diversification goals through reuse strategies. These developments will, however, be eligible to voluntarily implement water reuse systems aided by Austin Water's rebate programs..

Council is also considering other code amendments that increase development capacity of housing projects. A preliminary analysis has shown that relaxed height restrictions and eliminating minimum parking requirements can more than offset the additional marginal costs of incorporating onsite water reuse or reclaimed water systems in Large Development Projects.

In alignment with the findings of this report, staff is proposing the following next steps for Council to fully implement the onsite water reuse system and reclaimed water connection requirements prior to the December 1, 2023 effective date in the Land Development Code:

- Set a public hearing to adopt an ordinance to amend City Code Chapter 25-9 (water and wastewater) to clarify requirements for water conservation in the implementation of the water forward plan, including adding definitions, specifying measurement of distances, eliminating certain variances, and providing exceptions for certain affordable housing projects to the reclaimed water and onsite water reuse system requirements.
- Conduct a public hearing and consider an ordinance to amend City Code Chapter 25-9 (water and wastewater) to clarify requirements for water conservation in the implementation of the water forward plan, including adding definitions, specifying measurement of distances, eliminating certain variances, and providing exceptions for certain affordable housing projects to the reclaimed water connection and onsite water reuse system requirements.
- Consider an ordinance to amend City Code Chapter 15-13 (Regulation of Onsite Water Reuse Systems) to establish development project requirements for mandatory onsite water reuse systems, and add clarifying language to onsite water reuse system regulations.
- Reauthorize the Onsite Water Reuse System Pilot Incentive Program for Fiscal Year 2024 to encourage voluntary installation of these systems for housing projects that are exempt from the requirement to install them.

It should be noted that these steps would need to be completed by November 30, 2023 to avoid ambiguity in the mandatory water reuse requirements for new large development projects that go into effect December 1, 2023.

Affordability Impact Statement

Mandatory Reclaimed Water Connections and Onsite Reuse

Initiated by: Ordinance No. 20210930-117
September 19, 2023

Proposed Regulation

In 2021, City Council passed Ordinance No. 20210930-117 to implement water saving strategies in service of Water Forward goals. The ordinance increased the mandatory connection distance requirement for reclaimed water from 250 feet (today) to 500 feet for Large Developments (250,000 square feet (GFA) or larger). The ordinance also required large developments to utilize an Onsite Water Reuse System (OWRS). (Notably, a development subject to these regulations need only choose one.) A variance was included for large developments with a multifamily component, ending on December 1, 2023. **Part 8** of the ordinance requisitioned a detailed report that quantified the additional costs that these requirements would incur, and that recommended potential offsets to preserve housing affordability. Austin Water provided this report to the housing department in August 2023, and this report forms the basis of the housing department updated Affordability Impact Statement.

Austin Water is proposing additional amendments to Chapter 15-13 of City to include the final regulatory requirements as shown below:

Large Development Type	Required Alternative Water Sources	Required Non-potable Uses
Commercial, Multifamily and Mixed Use	Rainwater and A/C Condensate	Toilet/Urinal Flushing Irrigation Cooling Clothes Washing
Suburban Multifamily	Rainwater and A/C Condensate	Irrigation

	Austin Water is also proposing to amend Chapter 25-9 to not require large developments to connect to a reclaimed water line or use reclaimed water, or construct, operate, or maintain an onsite water reuse system if the development is: 1) approved for Low Income Housing Tax Credits for affordable housing as verified by the director of the Housing Department; or 2) A qualifying development that is certified under Section 25-1-724 (Certification) and participating in the Affordability Unlocked Bonus Program Prior to issuance of a Certificate of Occupancy, the Director of the Housing Department shall verify that a land use and restrictions agreement has been recorded in the public property records which memorializes the affordability requirements of Subsection (1) or (2)
Land Use/Zoning Impacts on Housing Costs	☐ Positive ☒ Negative ☐ Neutral **Cisterns** Onsite Water Reuse Systems require the installation of a cistern. The space occupied by cistern will not be included in impervious cover calculations. Austin water estimates this will generally occupy an area equivalent to three parking spaces, two for the cistern and one for the filtration system. Projects utilizing OWRS may be able to mitigate other impacts to development capacity. Austin Water is currently working with the Watershed Protection Department to reduce the required size of onsite stormwater quality control ponds for developments that capture rainwater for reuse. **Midrise Construction**

	OWRS and reclaimed water connections add the most cost for midrise construction. As the midrise typology fits with the city's goal of walkable, transit-supportive development patterns, coordinating the implementation of parking reductions and other potential offsets could ensure that this building typology is not discouraged citywide. ## Offsets from Other Code Amendments The proposed ordinances would continue to exempt projects with large amounts of affordable housing. Market rate projects, including ones that use affordable housing incentive programs, would experience increased costs. However, the December 2023 expiration of the current variance coincides with proposed modifications to the land development code that would significantly increase development capacity, such as eliminating parking minimum requirements, initiated by Resolution No. 20230504-022. Austin Water's analysis found that a midrise development subject to OWRS and reclaimed water requirements could lose up to 7 units; relaxed parking requirements would enable the same development to gain up to 38 units. Reductions to parking minimums are expected to be implemented before 2024. This indicates that the cost impacts of OWRS and reclaimed water requirements for Large Developments could be offset by imminent code changes. Housing development may also be benefited by the city-wide reduction to compatibility standards initiated by Resolution No. 20230608-045 and currently on track for adoption in February or March of 2024.
Impact on Development Cost	☐ Positive ☒ Negative ☐ Neutral Both OWRS and reclaimed water connections will add cost to development. Developments subject to these regulations will not be required to do both, but rather can choose one or the other. In quantifying the added costs of the proposed code amendments, Austin Water examined construction costs and ongoing costs separately. The proposed code amendments add the greatest costs to midrise development when compared with high rise or suburban multifamily typologies.

New code requirements can lengthen the development process, which increases the overall project cost. Austin Water has taken several steps to minimize or prevent added review time, including creating a new dedicated review team with the Utility Development Services Division that could meet with applicants before application submittal and a new dedicated review team with the Utility Development Services Division and coordinate with other staff in the review process.

Construction Costs

Net added Construction Costs (including offsets):

Housing typology	Total added construction cost (OWRS)	Total added construction cost (Reclaimed)
High rise	$464,100	$198,900
Mid rise	$1,597,500	$990,000
Suburban MF	$456,000	$1,311,000

Added costs are shown in net present value over a 30-year period.

Added costs for Renters (OWRS):

Typology	**Neighborhood**	**Average apartment rent**	**OWRS added cost**	**% OWRS added cost**
Suburban MF	Pilot Knob	$1,554	$3	0.19%
High Rise	Downtown	$3,152	$8	0.25%
Mid Rise	South Congress	$1,985	$23	1.16%

Added costs for Renters (Reclaimed):

Typology	**Neighborhood**	**Average apartment rent**	**Reclaimed added cost**	**% Reclaimed added cost**
Suburban MF	Pilot Knob	$1,554	$5	0.32%
High Rise	Downtown	$3,152	$-1	-0.03%
Mid Rise	South Congress	$1,985	$10	0.50%

The stacked plumbing systems accessible to high rise development result in lower added construction costs. As a result, residents of high-rise buildings can experience cost savings within a 30-year time span.

Ongoing Costs

Ongoing costs for OWRS include maintenance costs for treatment systems, annual cross connection tests, and annual backflow prevention tests. Ongoing costs are offset by ongoing savings from smaller meter charges and reduced volumetric water charges on monthly utility bills.

Ongoing costs for reclaimed water connections include annual cross connection and backflow prevention tests, in addition to routine maintenance. Ongoing savings are the same as those for OWRS.

Offsets

Offsets for projects that implement OWRS and reclaimed water connections include:

- Reduced water and wastewater impact fees and exemption from submetering requirements (wherein a water meter must be connected to each individual unit in a multifamily building)
- Designing the requirements to overlap with existing requirements or optional programs, allowing builders to reduce the size of onsite stormwater quality ponds and get credit for dual plumbing in the Austin Energy Green Building program dual plumbing requirement
- Reduced volumetric water and wastewater charges
- Low interest financing from a state program called Property Assessed Clean Energy (PACE) for developments that are also pursuing energy saving strategies

Stakeholder Outreach

Since June of 2019, Austin Water has met with members of Austin's development community to gather feedback on implementing the proposed measures. Major concerns raised by development stakeholders include concerns about costs and making sure the new requirements do not extend review time to projects.

Impact on Affordable Housing	☐ Positive ☒ Negative ☐ Neutral ## Exemption for Deeply Affordable Housing Austin Water is proposing that Large Development projects participating in the Affordability Unlocked Density Bonus Program or approved for Low Income Housing Tax Credits be exempted from the proposed requirements. This exemption increases the attractiveness of Affordability Unlocked, which has the most robust affordability requirements of any city development incentive program. Austin Water's analysis showed that, based on the Austin Housing Inventory, approximately 73% of the 13,604 income-restricted units that have been produced or are in development since 2019 will remain unaffected by the proposed water reuse regulations. This is either because of the scale of the development or because they meet the criteria for Affordability Unlocked. There would be a negative impact for the affordable units produced through incentive programs or development agreements that set aside fewer than half of the total units in the development. These projects would see increases in upfront and ongoing costs. In Austin Water's analysis this represented 27% of the income-restricted units produced or are in development from 2019. Austin Water is further proposing an exemption for projects that use state and federal tax credit programs to provide income-restricted housing, which generally targets incomes below 50% MFI. This is particularly significant as the city is struggling to produce this type of housing; the 2021 strategic housing blueprint scorecard showed that Austin has produced 4% of the housing at or below 30% MFI needed to meet its long-term goals. These exemptions would prevent the proposed code amendments from impacting construction of new deeply affordable housing, or from disincentivizing the city's most robust incentive program. ## Naturally Occurring Affordable Housing

	While new development is one source of affordable housing, the nation's largest stock of affordable housing is "naturally occurring." Naturally Occurring Affordable Housing (NOAH) is generally comprised of older market-rate housing stock. The proposed regulations do not negatively impact this housing stock and will benefit NOAH occupants by contributing to a resilient water supply.
City Policies Implemented	Proliferating the use of reclaimed water supports goals identified in Imagine Austin Priority Program 2: Sustainably Manage Our Water Resources, the Climate Equity Plan, the Watershed Protection Strategic Plans, and the Water Forward plan.
Other Policy Considerations	OWRS and expanded reclaimed water requirements will increase construction costs for properties that are not exempted. This may negatively impact the output of non-exempt incentive programs and market rate housing. Austin Water has invested significant effort in mitigating the impacts the new costs may have on deeply affordable housing. Austin Water's mitigation strategies are particularly targeted at affordable housing for the Austinites with the fewest housing options. Housing staff acknowledge that failing to secure a resilient drinking water supply has its own long term cost implications for marginalized Austinites, the local economy, and the housing market. Austin just experienced its driest summer in 113 years, and hot, dry conditions are only projected to intensify. Reuse strategies are necessary to avoid catastrophic effects to public health, and to avoid housing production issues experienced by Phoenix developers, who were recently denied permits unless they could supply their new project with alternative water sources to the ones on which Phoenix has historically relied. As the proposed changes are implemented, the Housing Department will continue monitoring the impact resulting from increased development costs and potential time additions to the review process.

Manager's Signature _Marla Torrado_