

# Mandatory Water Reuse Ordinances

September 12<sup>th</sup> 2023 WFTF Meeting | Katherine Jashinski, P.E.





# Agenda:



1

**Background on the Ordinances**

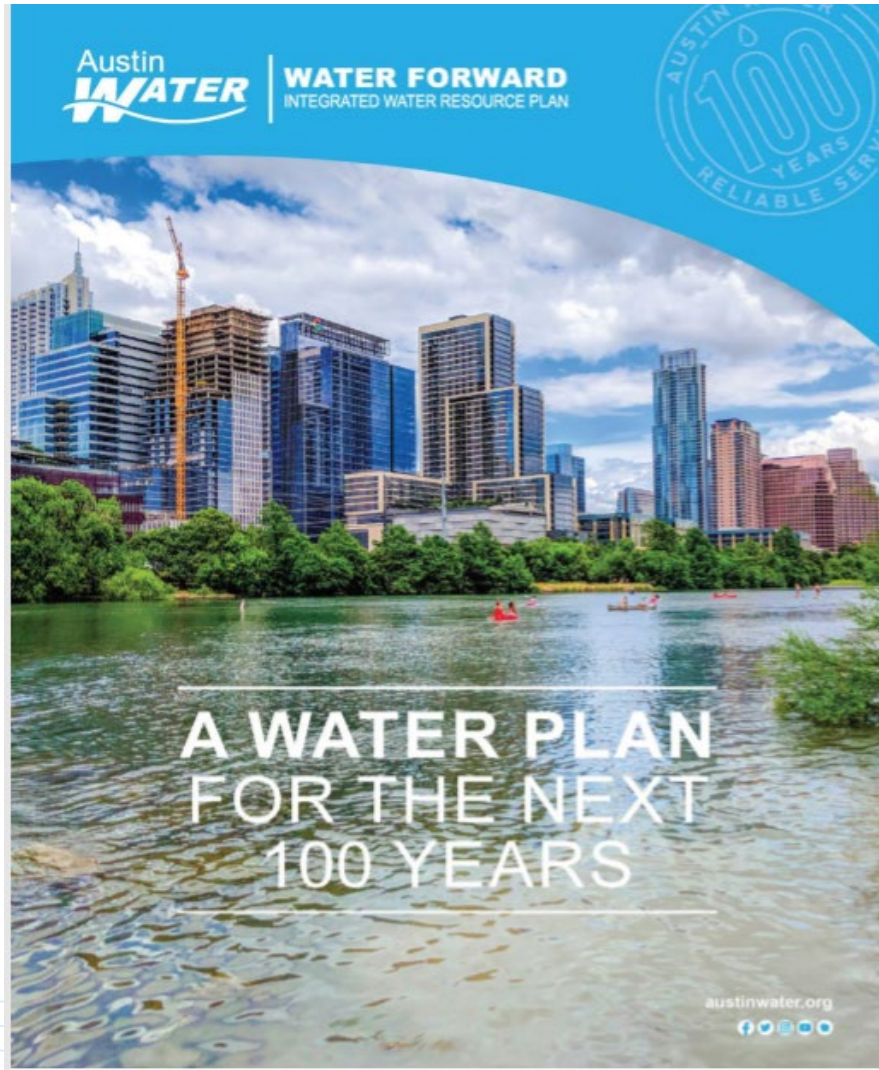
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**Recent Implementation & Public Engagement**

3

**Next Steps**

# Water Forward Conservation & Reuse In The LDC



- Council direction in May of 2019 to include Water Forward regulations into the LDC Revision
- AW was specifically asked to address code changes for **large commercial developments ≥250,000 SF**
- Multiple public stakeholder meetings were held on these code changes in 2019, but ultimately the Land Development Code revision didn't move forward



# Key Takeaways From Public Input On Mandatory Reuse Ordinances

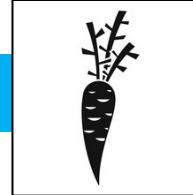
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Concerns about system costs and effects on affordability



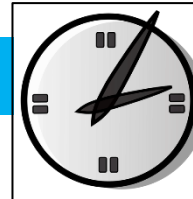
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Would like to see developer incentives to offset costs



3

Want to avoid increasing project review time due to new regulations



4

Need for clarification on mandatory installations



# Onsite Water Reuse System (OWRS) Program

**Phase 1 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 multi-family & commercial systems
- Encourage voluntary adoption of OWRS in new development to test out the new regulatory framework with pilot incentive

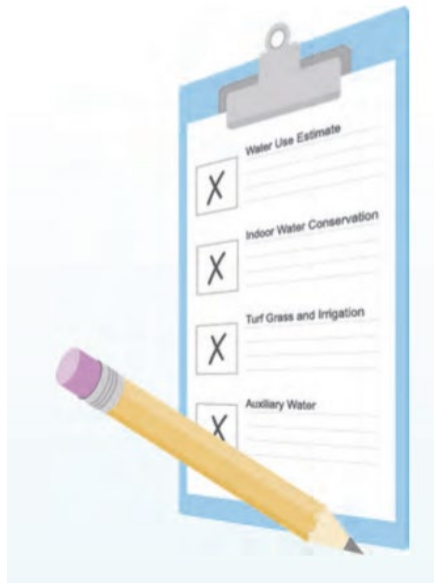
**Phase 2 to take effect December 2023**

## Mandatory OWRS Program

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

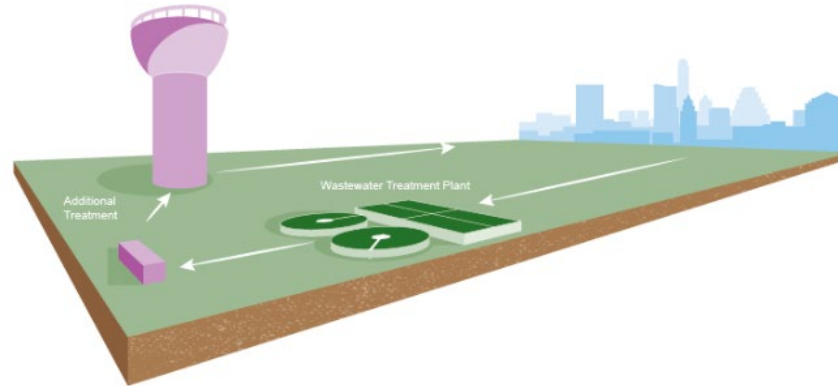
# LDC Amendments in 2021

## WATER BENCHMARKING

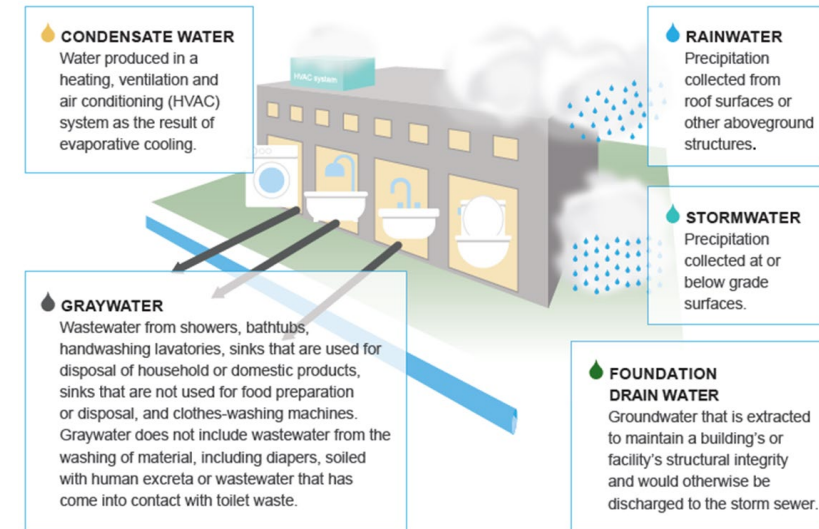


**Effective Dec. 1, 2021**

## RECLAIMED WATER

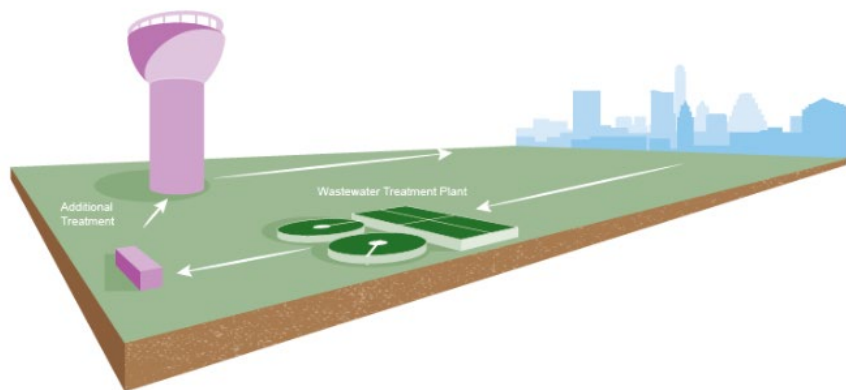


## ONSITE WATER REUSE



**Effective Dec. 1, 2023**

# Reclaimed Water Requirements



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.

2021 ordinance



**Large Development Project** within **500 feet** of a reclaimed main must connect and use reclaimed water for irrigation, toilet flushing, cooling. Variances for multifamily housing projects until Dec. 1, 2023.

# Addressing Housing Affordability

## Ordinance No. 20210930-117

- ♦ On or before September 28, 2023, the City Manager shall provide a report and possible actions for council consideration concerning the impact of the requirements for an Onsite Water Reuse System and the expansion of the current Reclaimed Water Connection mandate on housing affordability

Gave staff time to develop final recommendations on the applicability for the mandates and to compile cost vs. savings estimates





# Voluntary OWRS Program Summary



6 OWRS permit applications

- 2 cooling tower system approvals
- 2 pilot incentive applications
- 2 blackwater system applications



Commissioned OSCAR & CLARA

- Operational since May 2022
- Tours to the public



Water Benchmarking applications

- Reviewed over 300 site plans
- Meetings with development teams



Integrated into COA development review

- Alignment for future program requirements
- Coordination on development review processes



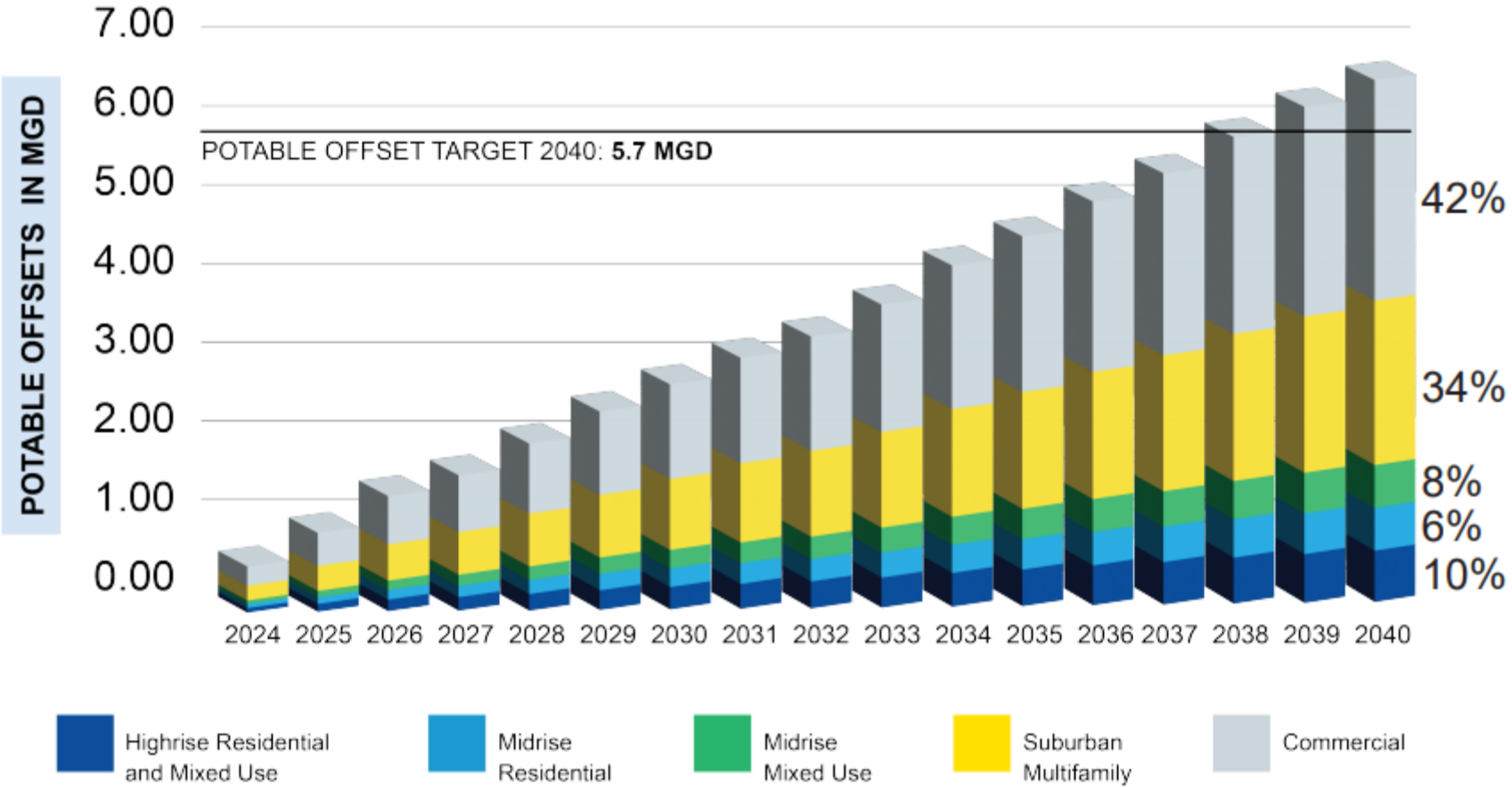
# Proposed Onsite Water Reuse System Requirements

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

- ✓ Cisterns must be sized to capture 1" of roof runoff to meet the requirement
- ✓ Reclaimed water or another onsite water source may be substituted



# Cumulative Potable Water Offsets from Onsite Water Reuse





# Onsite Water Reuse Costs

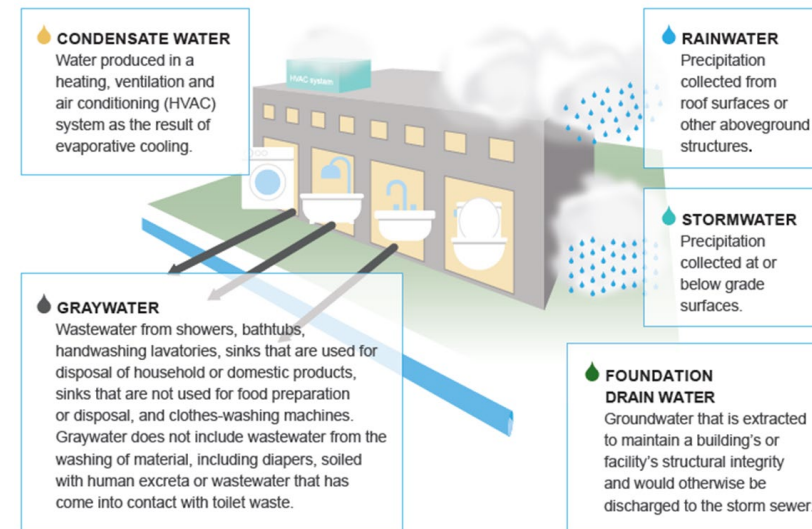
## Capital Costs

- Installation of a collection and treatment system
- Cost to dual plumb building and supply non-potable water\*

## Operational Costs

- Annual cross connection & backflow testing
- Annual O&M of treatment system

\*consultant study



## vs. Savings/Incentives

- Reduced Impact Fees and meter charges
- Reduced volumetric water and wastewater charges
- Relief from submetering requirements
- Reduced WQV to meet SMO\*

# Austin Market-Rate Multifamily Housing



**High rise**



**Mid rise mixed use**



**Mid rise**

Housing typology	Neighborhood	Built in	Sq ft	Sale price	OWRS added cost	Reclaimed added cost	OWRS cost as percentage of sale price	Reclaimed cost as percentage of sale price
Highrise	Downtown	2019	618	\$550,000	\$2,100	\$900	0.38%	0.16%
Highrise	Downtown	2018	999	\$950,000	\$2,100	\$900	0.22%	0.09%
Highrise	Downtown	2022	3,234	\$4,990,000	\$2,100	\$900	0.04%	0.02%
Midrise	S. Congress	2023	973	\$699,000	\$7,100	\$4,400	1.02%	0.63%
Midrise	S. Congress	2021	1,225	\$599,950	\$7,100	\$4,400	1.18%	0.73%
Midrise	S. Congress	2023	811	\$499,000	\$7,100	\$4,400	1.42%	0.88%

For housing units sold in the \$500K to \$5M range, reuse ordinances can add 0.02% to 1.42% to the cost



# Austin Apartment Rental Market

Typology	Neighborhood	Average Apartment Rent	Added Reclaimed Cost	Added OWRS Cost	% Reclaimed Cost	% OWRS Cost
MF Suburban	Pilot Knob	\$1,554	\$5	\$3	0.32%	0.19%
High Rise	Downtown	\$3,152	\$-1	\$8	-0.03%	0.25%
Mid Rise	South Congress	\$1,985	\$10	\$23	0.50%	1.16%

Additional Monthly Cost Per Unit of Housing Using a 30 Year NPV				
	HIGH RISE	MID RISE	MID RISE MIXED USE	SUBURBAN MF
Reclaimed 251-500'	-\$3 to -\$1	\$8 to \$10	\$0 to \$4	\$4 to \$5
RW+AC	\$8	\$23	\$22	\$3





# Other Cost Offsets + Cost of Inaction



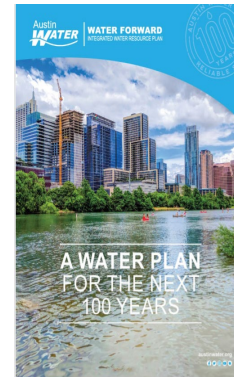
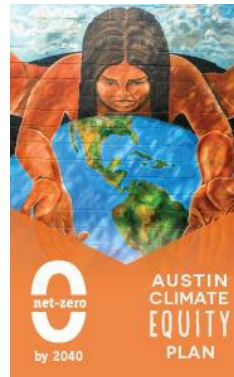
- Exemptions for deeply affordable housing projects
- Continue OWRs pilot incentive program
- Other Land Development Code changes as offsets
- PACE financing for reuse



Overlap with other code requirements for Functional Green and AEGB ratings



Not being a resilient city that is prepared for a changing climate



The New York Times

**BREAKING**

## Arizona Limits Construction Around Phoenix as Its Water Supply Dwindles

Officials ruled there's not enough groundwater for projects already approved — a potential glimpse of the challenges facing the West as climate change worsens.

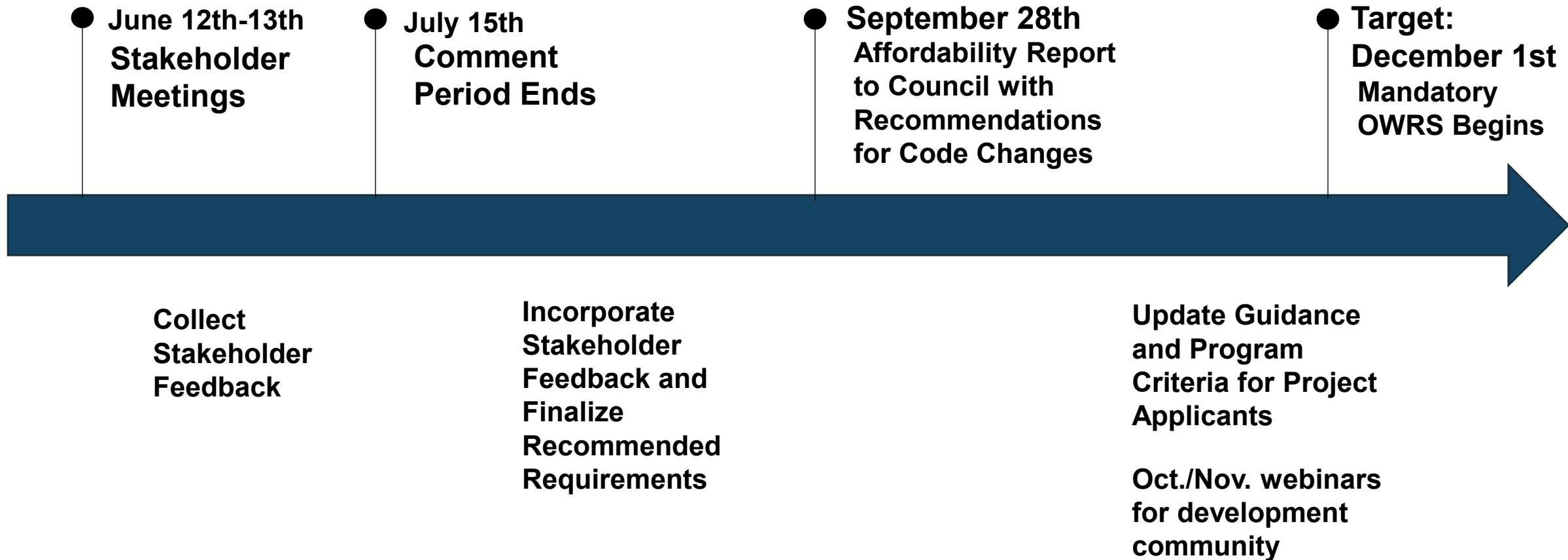
5 MIN READ



Rebecca Noble for The New York Times



# Recent and Next Steps





# Questions?

