WaterSense® Labeled Homes

Version 2.0

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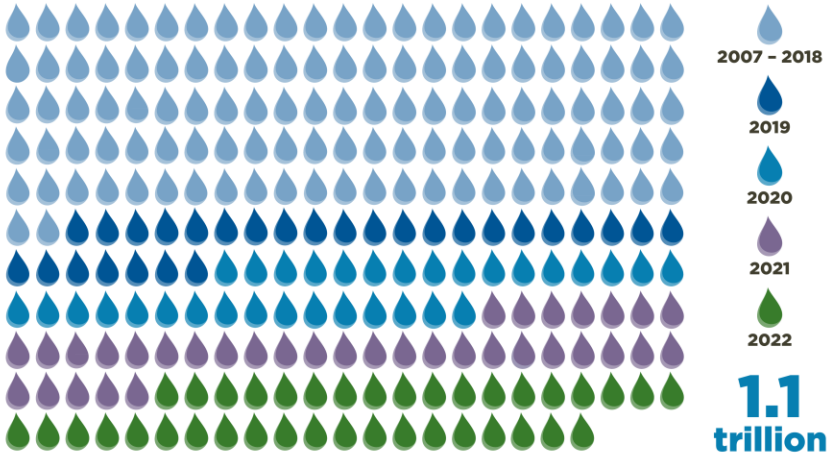
NWPA | September 2023

WaterSense Through 2022

WaterSense partners helped save

7.5 trillion gallons of water

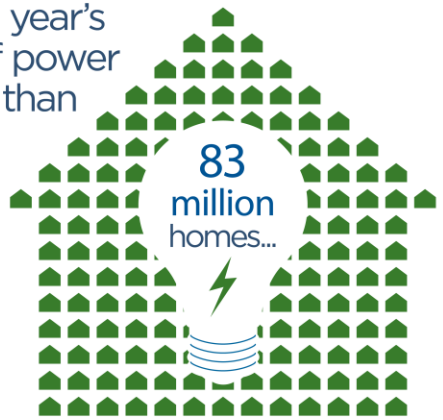


That's the water used in **9.5 months** by all U.S. households!

1.1 trillion gallons saved in 2022

WaterSense has helped reduce the amount of energy needed to pump, treat, and heat water by

880 billion kilowatt hours, enough to supply a year's worth of power to more than

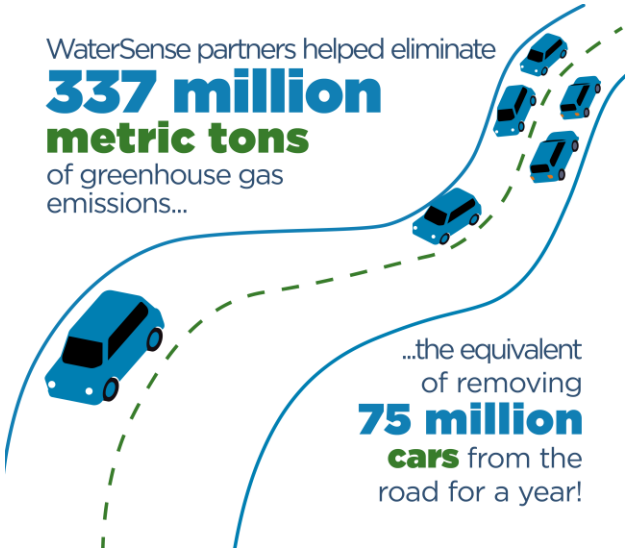


WaterSense partners helped consumers save

$171 billion in water and energy bills

WaterSense partners helped eliminate

337 million metric tons of greenhouse gas emissions...



...the equivalent of removing **75 million cars** from the road for a year!

WaterSense Labeled Products

More than **43,000** product models have earned the label. Water factors are included in many **ENERGY STAR** certified products.

Flushing Urinals

Showerheads

Lavatory Faucets

Flushometer Valve Toilets

Tank-Type Toilets

Irrigation Controllers

Spray Sprinkler Bodies

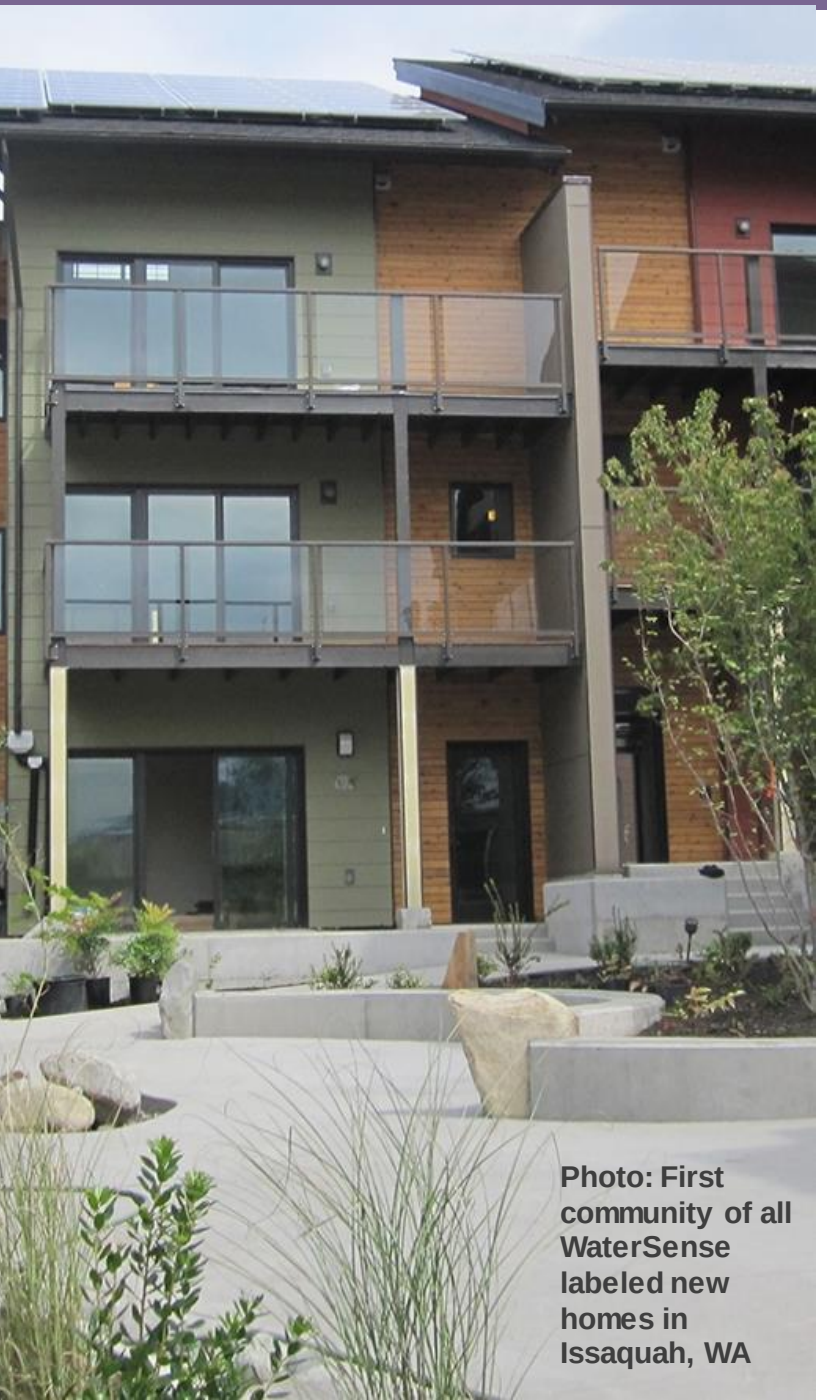


Photo: First community of all WaterSense labeled new homes in Issaquah, WA

WaterSense Labeled Homes

- First national certification for water efficiency
- Provides a consistent and comprehensive approach to efficient homes
- Version 2.0 became effective in 2022:
  - Reduces water use in homes by **at least** 30% compared to code-built homes
  - Are third-party certified using existing certification infrastructure, overseen by EPA
  - Offers more flexibility relative to V1 while maintaining or increasing efficiency
  - Responds to market and climate changes

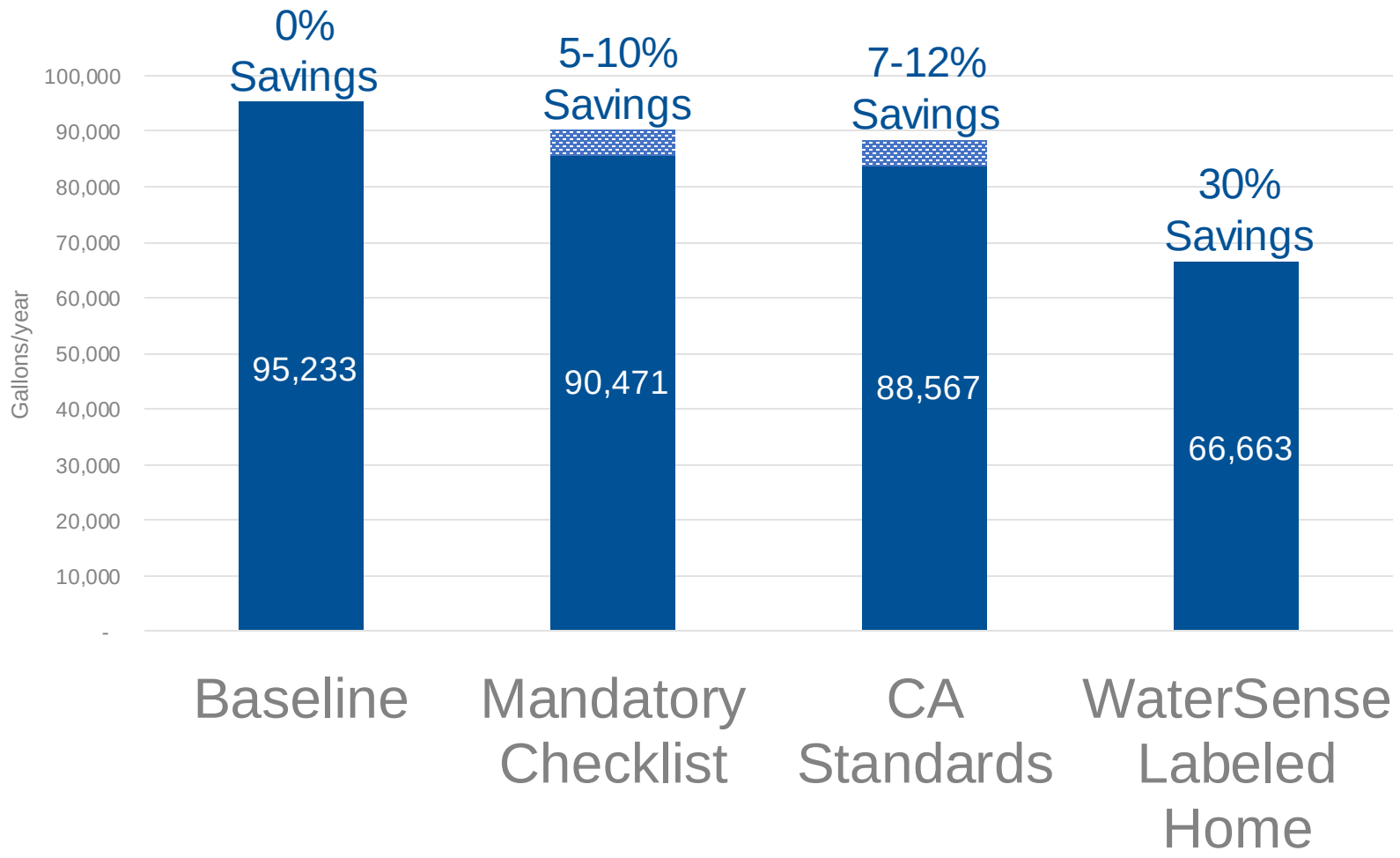
https://www.epa.gov/watersense/homes

Benefits of WaterSense labeled homes for Communities

- Lots of savings, built in from the start
  - New construction/substantial renovation allows us to target maximum savings for smallest incremental cost
  - Savings are achieved throughout the life of the home
- Whole-house building science approach is more effective than product/specification/retrofits alone
  - A home's systems (plumbing, irrigation, etc.) don't lend themselves to product labeling
  - Provides a template for continued savings beyond product replacement
- Whole-house building science approach is more effective than product/specification/retrofits alone
  - Adaptive to climate and market considerations
  - Confidence and durability of savings is increased by onsite verification and quality assurance

How Much Can We Save in Seattle?

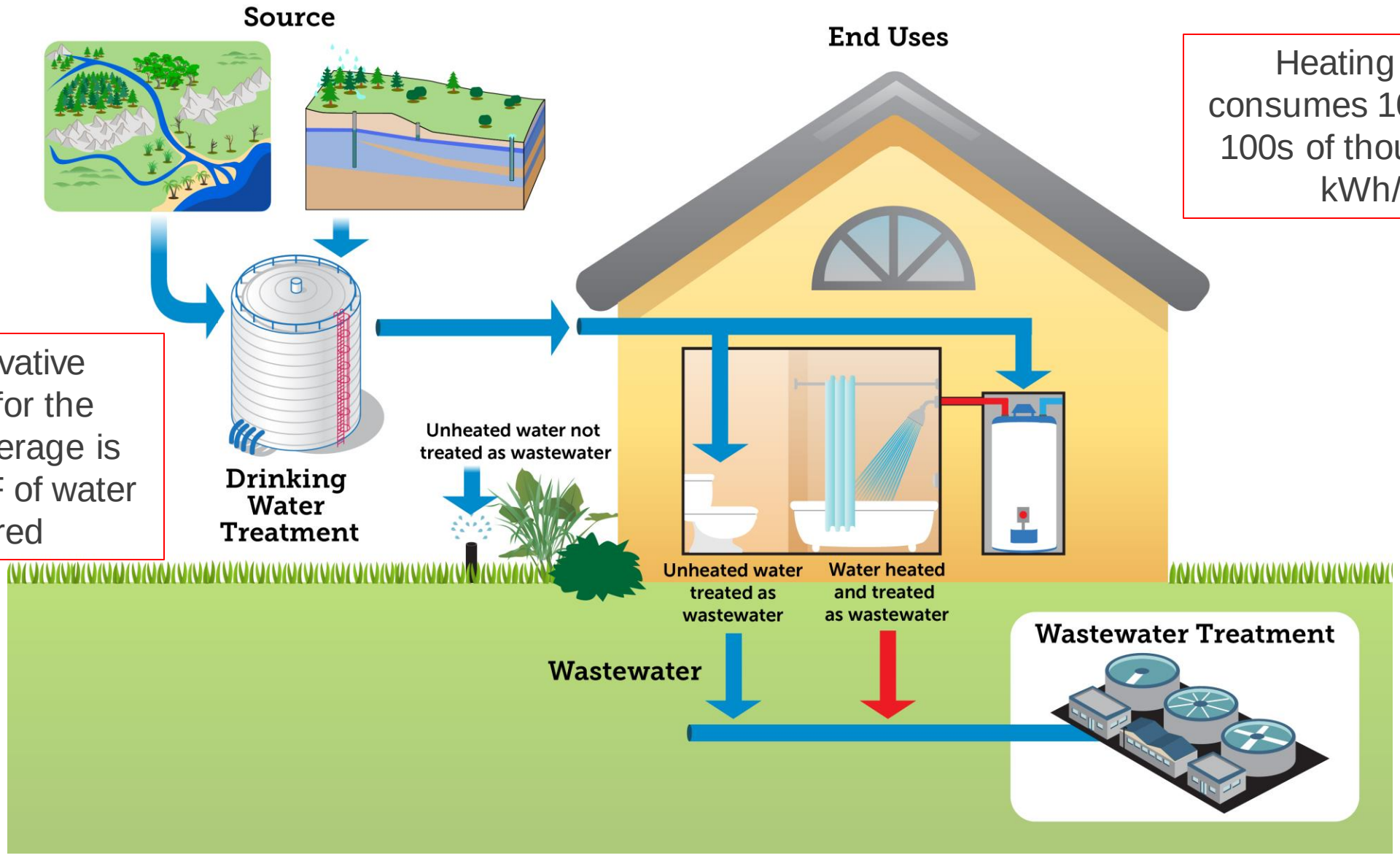
- Assuming a statistically average home
- Single-family home in Seattle, WA
- 2.61 people per household
- ~10,000 ft2 lot with ~5,800 ft2 of landscaping



Benefits of WaterSense labeled homes for builders/developers

- Added value to the homebuyer
  - Cost savings
  - Comfort
  - Quality
- Savings and performance with flexibility
- Water is an increasingly important part of the land entitlement process
  - Availability of water/service connections is frequently the deciding factor in a site's viability
- Disclosure and ESG reporting requirements
  - Being responsible stewards of water is an important part of the building industry's social license to operate AND often a prerequisite for investment
- Water has to be part of the decarbonization discussion

What Influences the Energy Profile of Water?



A conservative estimate for the national average is 674 kWh/AF of water delivered

Heating water consumes 10s or even 100s of thousands of kWh/AF

A conservative estimate for the national average is 800 kWh/AF of wastewater treated

Version 2.0 Requirements

Technical requirements for homes

- Meet all items on the mandatory checklist
- Meet an efficiency threshold of 30% below typical new construction (based on national norms)

Specification

Requirements for Home Certification Organizations (HCOs)

- Organizational requirements for oversight, quality assurance, training, reporting, and managing conflicts of interest

Certification System

- Technical evaluation of the proposes certification method
  - Will it effectively differentiate homes that save 30%

Technical Evaluation Process

Technical Requirements for V2

MANDATORY CHECKLIST FOR WATERSENSE LABELED HOMES

Item	Requirements	Confirmed
Leaks	Pressure-loss test on all water supplies detected no leaks	☐ Yes ☐ No
	Free of visible leaks from hot water delivery system	☐ Yes ☐ No
	Free of visible leaks from toilet(s), as determined through visual assessment and by conducting a dye tablet test in each toilet to ensure the flapper is not leaking	☐ Yes ☐ No
	Free of visible leaks from bathroom faucet(s)	☐ Yes ☐ No
	Free of visible leaks from showerhead(s)	☐ Yes ☐ No
	Free of visible leaks from bathroom tub faucet(s), i.e., tub spout(s), when showerhead(s) is activated, as determine through visual assessment after showerhead has been activated for one minute	☐ Yes ☐ No
	Free of visible leaks from kitchen and other sink faucet(s)	☐ Yes ☐ No
	Free of visible leaks from other fixtures or appliances (e.g., clothes washers, dishwashers, hose bibs, irrigation systems) at point of use or point of connection to water distribution system	☐ Yes ☐ No
Toilets	WaterSense labeled	☐ Yes ☐ No
Bathroom sink faucets	WaterSense labeled	☐ Yes ☐ No
Showerheads	WaterSense labeled	☐ Yes ☐ No

- Meet all items on the mandatory checklist
- Meet an efficiency target of 30% relative to standard new construction

How do I Measure 30%?

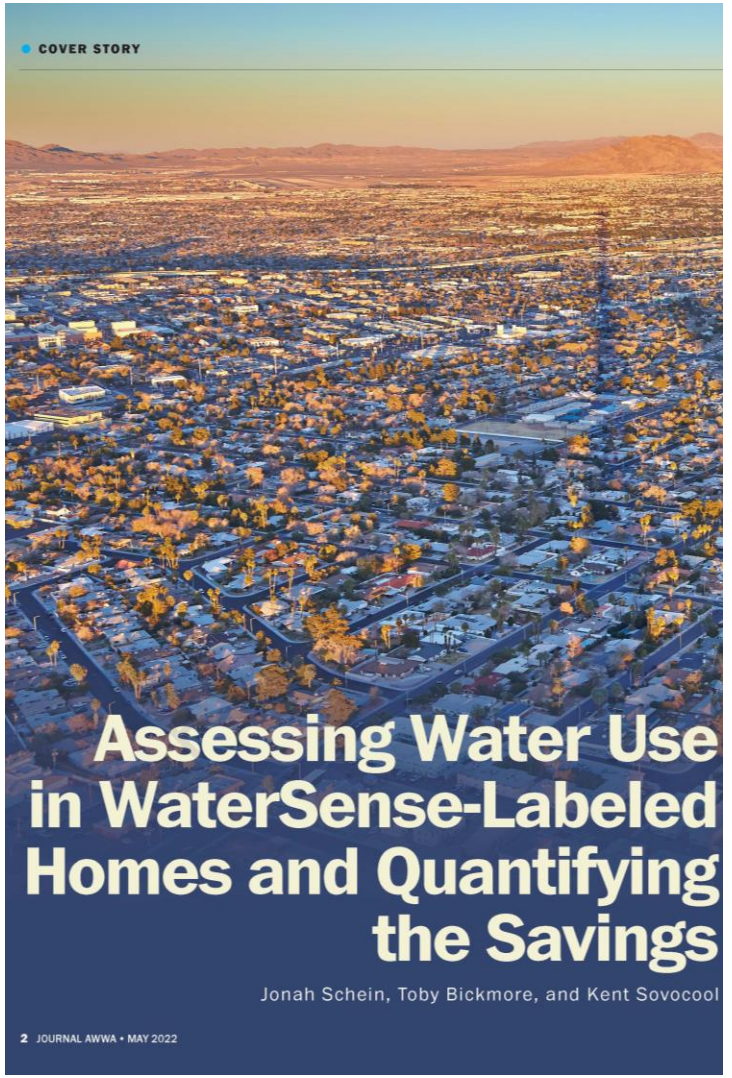
- EPA allows HCOs to develop their own method of measuring water use
  - EPA retains the role of reviewing/approving each HCO's method
  - This evaluation protocol is available on our website
- EPA has approved **Home Certification Organizations (HCOs)**
  - HCOs can use a different tool or approach to measure the 30% efficiency requirement.
  - EPA evaluates their method, as part of the application process, to reiterate that the tools are measuring water efficiency accurately.
- Goal is to protect the integrity of the WaterSense Program and label ensuring certified homes meet the stated efficiency threshold regardless of the HCO used.
- Allows efficient use of existing infrastructure for volumetric predictions/rating systems

EPA Approved HCOs

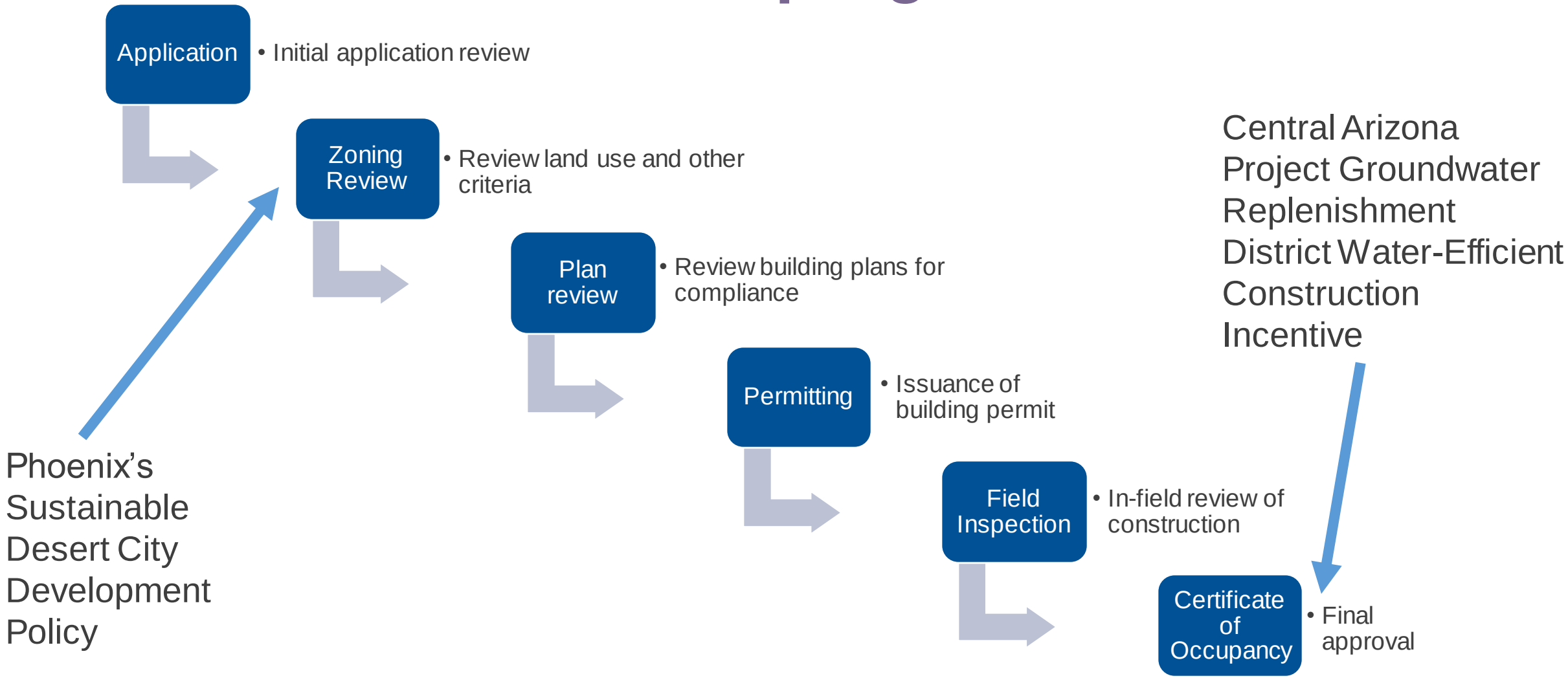
HCO	SCOPE			METHOD FOR LABELING HOMES
	REGIONALITY	BUILDING TYPES	CONSTRUCTION TYPE	
CHEERS		Single-Family	New Construction	Achieve a score of 70 or less under CHEERS WaterSense
GreenBuilder COALITION		Single-Family	New & Existing Construction	Achieve a score of 66 or less under the Water Efficiency Rating Score (WERS) with WaterSense Baselines
NGBS GREEN Home Innovation Research Labs		Single-Family & Multifamily	New & Existing Construction	Complete a set of selected practices from the National Green Building Standard (NGBS)
			New Construction	Achieve a score of 64 or less under the Water Rating Index
RESNET HERS$_{H2O}$		Single-Family	New & Existing Construction	Achieve a score of 70 or less under HERS$_{H2O}$

Las Vegas Pilot Study

- V2 was piloted in the Las Vegas region in the summer of 2020 following the sunset of Water Smart Homes
  - 568 homes were certified through the pilot project
- Metered water usage was collected from the retail utilities and paired with information gathered during the inspection/certification process
- Median use was 44 kgal/year (based on 160 WaterSense labeled homes) compared to 97 kgal/year in typical new construction in the area
  - At this rate roughly 7.5 homes/year can be supplied with an acre-foot of water compared to 3-4 homes/year typically seen in the West
- Full report available online



How are communities using the WaterSense labeled homes program?



Get in touch…

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