



Water Wise Development Coalition

Intro for newbies!

- Who: ULI, in partnership with the Alliance for Water Efficiency, the Sonoran Institute, and the WaterNow Alliance, is convening land use and real estate professionals with policymakers and decision-makers. This coalition is supported by the Colorado Water Conservation Board.
- What: Advancing water-smart real estate development and supportive policies.
- When & Where: Quarterly virtual meetings.
- How: Participants will have a say in meeting topics, speakers, and efforts.





Agenda

- Welcome and Overview (5 min)
- Water Wise Policies, Regulations, &
 Incentives Presentations and Q&A (60 min: 20 min presentation & Q&A each)
 - Andrew D. Morris, Senior Manager of Policy and Programs for the Alliance for Water Efficiency, on state level policies and resources
 - Waverly Klaw, Director of Growing Water Smart for the Sonoran Institute, on local policies and resources
 - Morgan Hester, Planning Manager for the City of Colorado Springs, on how Colorado Springs updated its land use and landscape codes in alignment with its water efficiency plan goals
- Group Discussion & Updates (25 min)







WATER-WISE POLICIES, REGULATIONS, AND INCENTIVES AT THE STATE LEVEL

Water Wise Development Coalition Meeting - March 27, 2023 Andrew D. Morris

Alliance for Water Efficiency



The Alliance for Water Efficiency is a stakeholderbased nonprofit organization dedicated to the efficient and sustainable use of water.

Collaboration: Network of colleagues across water providers, governments, business and industry, researchers, nonprofits and other partners.

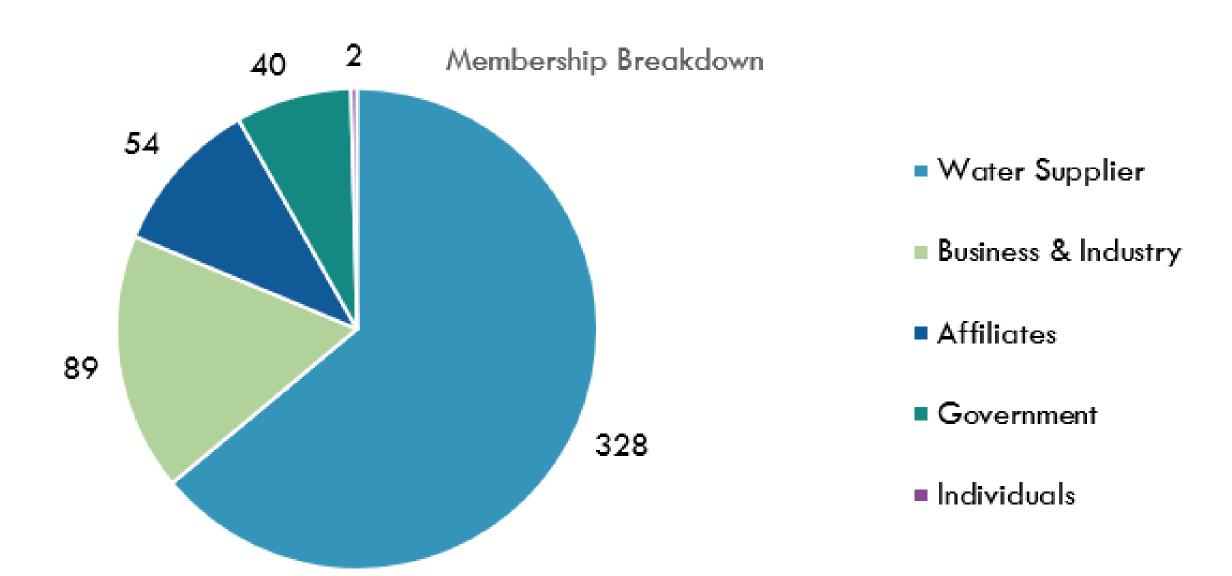
Knowledge: Creating and sharing resources, tools, trainings, expertise and research.

Change: Advocacy for funding, policies, and partnerships that advance water efficiency.

Learn more: www.a4we.org

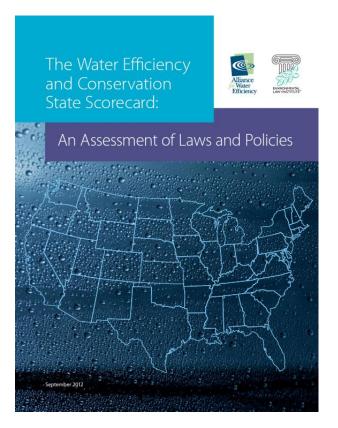
Alliance for Water Efficiency

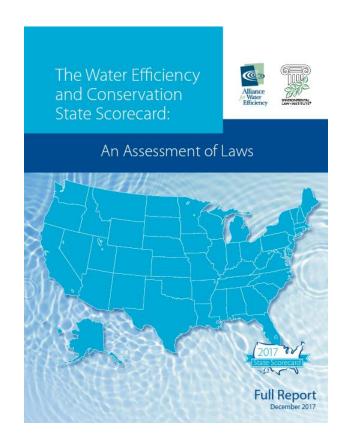


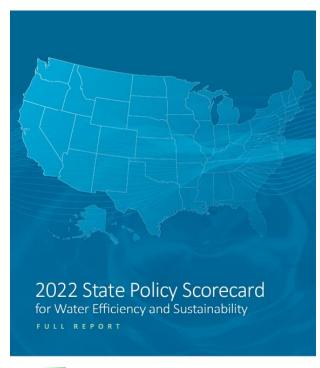




HISTORY OF THE SCORECARDS









2012 2017 2022

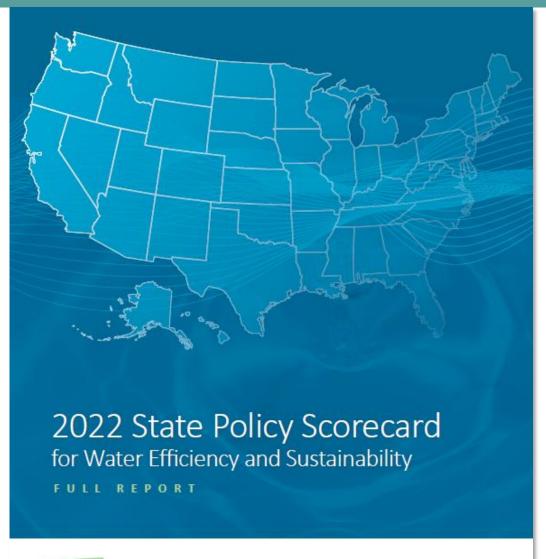


SCORECARD OVERVIEW

- Evaluation of state water efficiency policy
 - Not an evaluation of local water agencies/policies
 - Not an assessment of actual water use (e.g., gallons per capita per day) or water availability
- Focus on residential, commercial, industrial, and institutional water use











GOALS OF THE SCORECARD

- Encourage states to adopt laws/policies that promote water conservation and efficiency
- Highlight exemplary laws that can be foundational for other states
- Identify opportunities for states to improve
- Report includes individual state scorecards with recommendations



Primary Scoring Categories from 2017



Plumbing Fixture
Standards
and Codes

Water Loss Control Drought Preparedness Planning Water Conservation Planning

State Funding for Water Efficiency Programs State-provided
Technical
Assistance for
Water Efficiency

Rate Structures that Encourage Conservation

Climate Action Planning

Figure ES-2

New Scoring Categories for 2022

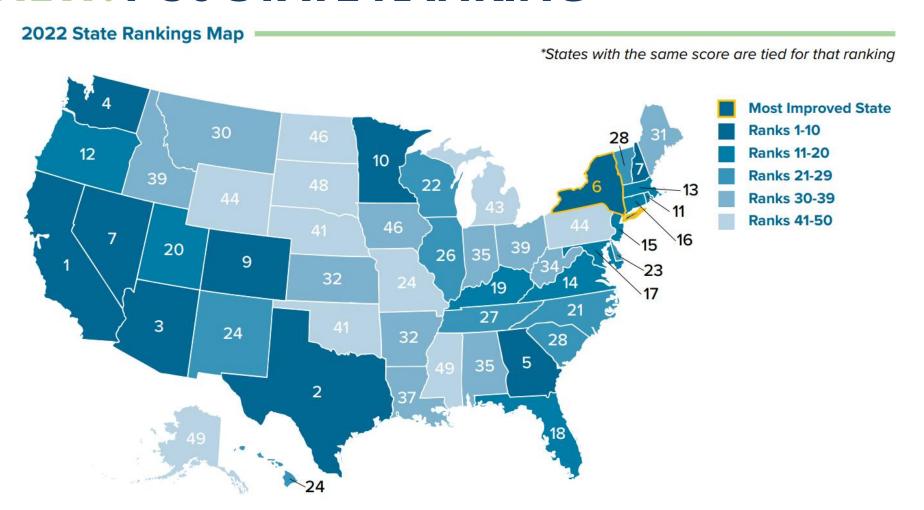
Water-Land Use Planning Integration

State Funding for Water Bill Assistance

State Funding and Support for Water Reuse Accounting for Energy Savings from Water Efficiency



NEW!1-50 STATE RANKING



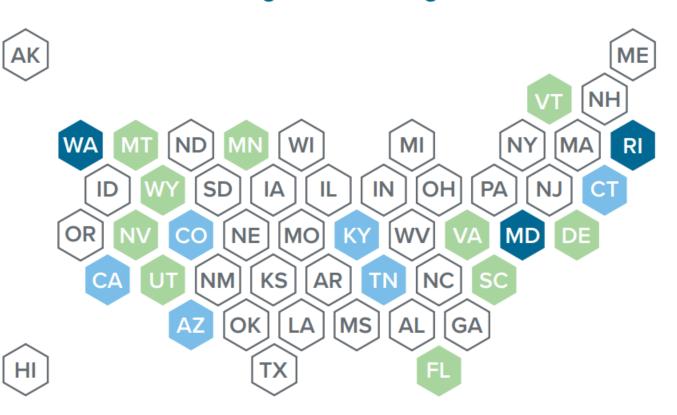
Тор 10	State
1	CA
2	TX
3	AZ
4	WA
5	GA
6	NY
T7	NV
T7	NH
9	CO
10	MN



NEW! WATER AND LAND USE INTEGRATION PLANNING POLICIES

Figure ES-9

Water and Land Use Integration Planning Policies



- State Requires Water Utilities to Incorporate Land Use Considerations and Requires Community Land Planners to Incorporate Water Utility Plans
- State Only Requires Water Utilities to Incorporate Land Use Considerations
- State Only Requires Community Land
 Planners to Incorporate Water Utility Plans
- State Does Not Require Either



WATER AND LAND USE INTEGRATION PLANNING POLICIES

Does a statute(s)/regulation(s) require water utilities to incorporate land use considerations (including but not limited to building/plumbing codes, subdivision regulations, land use plans, site plan reviews, development reviews, and things affecting zoning) into their water plans? (Q16)

Does a statute(s)/regulation(s) require community land use plans to incorporate water utility plans? (Q17)

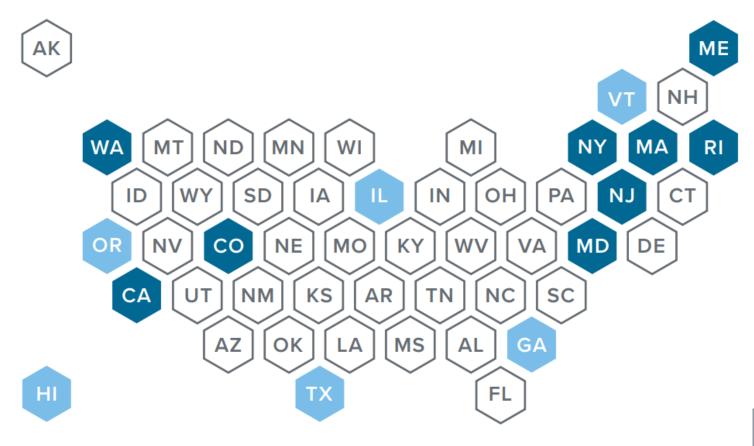
Is state funding or other assistance available to support this coordination between water utilities/plans and land use planners/plans? (Q18)

POINT-OF-SALE FIXTURE STANDARDS



Figure ES-4

Point-of-Sale Fixtures Standards



- State has Standards for Toilets, Showerheads and Urinals More Efficient than Federal Standard
- State has More Efficient Standards for 1-2 of the Fixture Categories; or Application is Limited (IL only)
- No Standards in Place That are More Efficient Than Federal Standards









Source: https://www.allianceforwaterefficiency.org/resources/topic/state-fixture-standards-matrix



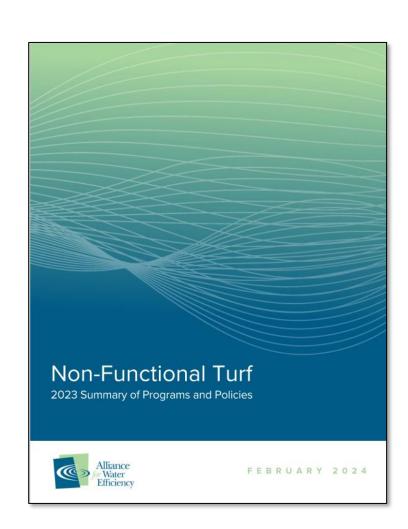
NEW PUBLICATION

Based upon virtual series of AWE-hosted conversations with CRB MOU signatories, focused on "non-functional turf".

Report captures key trends and approaches to limiting NFT from 2023.

These include:

- A range of definitions for what constitutes NFT;
- Different state and local approaches to reducing NFT;
- Efforts to map and quantify NFT and its water use;
- Water savings from transforming NFT into drought and climateresilient landscaping;
- Plants to use instead of NFT; and
- Funding from federal, state, and local sources.



Under Colorado's new water-saving law, here's where ornamental grass will be banned starting in 2026

Your front lawn can stay, but many property owners will have to change practices



This photo shows a landscape after the property owner in Castle Rock took part in the city's turf replacement program, which offers money to those willing to replace water-dependent lawns with more efficient landscapes. (Photo courtesy of the town of Castle Rock)





6 Crucial questions to consider for retirement feasibility

By Johnson Investment Counsel





MOST POPULAR



Titles - Calaur de alei anno alore des



Assessing Water Use in WaterSense-Labeled **Homes and Quantifying** the Savings

Jonah Schein, Toby Bickmore, and Kent Sovocool

WATER DEMAND CALCULATOR FOR PREMISE PLUMBING



Right-sizing premise plumbing and metering to account for water efficiency improvements

WITH IAPMO'S WATER DEMAND CALCULATOR ...

A **SINGLE-FAMILY HOME** can exceed \$2,000 in savings.

A **45-UNIT MULTI-FAMILY BUILDING** can exceed \$100,000 in savings.

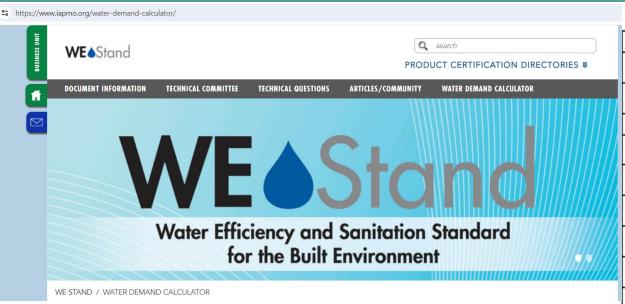


A 200-UNIT **HIGH RISE** APARTMENT could see \$250,000 in plumbing construction savings, and over \$10,000 per year in \mathcal{I} water and sewer charges.

Source: https://www.workingpressuremag.com/new-method-modernizes-hunters-curve-demand-estimates/

WATER DEMAND CALCULATOR FOR PREMISE PLUMBING





1. Download the WDC v2.2 from the IAPMO website



Water Demand Calculator

PROTECT NAME : Sick for Ency-down Meno -9 Single-Earthy Reside		nce -				Monday, May 23, 2020 12:09 PM	
rations oncors		rations	ENTER TOTAL AUGMENT OF FEITURES	PROBABLITY OF USE INI	OVER FROMB FLOW MATE (SPM)	MARRIAN RECOMMENSION FRITURE FLOW BATTE (UPW)	COMPUTED RESULTS FOR PEAK PERIOD CONDITIONS
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	3	Bridge	- 0	1.00	2.0	2.0	Total No. of Fishers in Calculation
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	- 6	Faund, Lavelory	0	230	1.8	1.8	0
	1	Shower, per head (no Bathqui)	0	X30	10	28	M [®] Percentile Demand Flow
		Water Classic, 1.38 GPF Gravity Tank	4	1.00	9.0		
	7	Stohoesher	. 6	030	1.9	3.8	
		Feucet, Krischen Strik	0.	199	3.3	11	Hunter Number
Laundry Room Eistures		Clottes Washer	0	550	35	8.5	
	10	Facial Laundry	0	2,00	2.0	18	
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	11	Foliare 2		0.00	0.0	60	-
	14	Fisture 3		0.00	0.0	6.0	Method of Computation
DOWNLOAD		MESET	LPM LI	_	RUN WOC	CUCK BUTTON	

IAPMO Seeks Water Demand Calculator Task Group Members. Read more...

Source: https://www.iapmo.org/water-demand-calculator/

WDC Jurisdiction Adoption List

STATE/CITY	ADOPTED	MANDATED
Beaumont	Х	
California	X (2024)	
County of Santa Cruz, CA	Х	
Foster City, CA	Х	
Hawaii	х	
Houston, TX	Х	
Montana	х	
Nevada	х	
New Jersey	х	
New Mexico	Х	
North Dakota	х	
Northern Georgia	X (2024)	
Oakland, CA	Х	
Oregon	Х	
San Jose, CA	х	
Seattle, WA	X	X (For multi-family 2024)
Washington	х	
Wisconsin	х	
Vancouver, BC	X	



QUESTIONS?

Contact: andrew@a4we.org

Alliance for Water Efficiency





Sonoran Institute

Est. 1990

Connecting people and communities with the natural resources that nourish and sustain them.

sonoraninstitute.org

Growing Water Smart is a training & assistance program that empowers local leaders to implement plans and policies that support community and regional water resilience.







Impact

- Trained over 100 Cities, Counties, and Towns since 2017.
- 19 workshops.
- Over 40 implementation projects carried out.
- Upcoming workshops in CA, CO, AZ, UT, and US/MX Border.

growingwatersmart.org

Land Use Plans and Policies.

Land use plans and policies are the governmental power to regulate what is built, and where.

- Existing development may use water inefficiently, possess outdated fixtures and appliances, development pattern already determined
- New development can increase water demand, impacts stormwater infiltration

...through smart planning and policymaking, we can build and redevelop communities that are resilient, sustainable, and equitable in the ways we utilize our scarce water resources.

Shifting the focus of water & land use planning.

Supply-Side



Acquisition



Treatment



Storage/ Distribution



Infrastructure

Demand-Side



Conservation



Efficiency

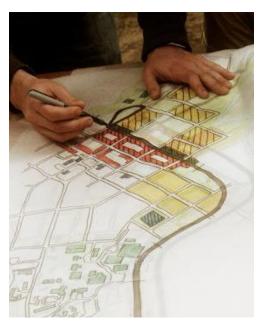


Reuse

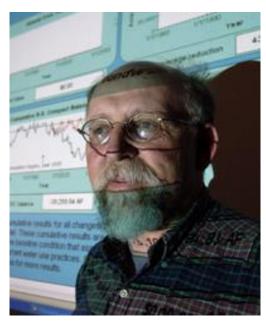


Low-Impact Development

Breaking Down Silos to Achieve Integration.



Land Use Planners



Water Resource Managers



Elected Officials

Seeking Multi-Benefit Solutions through Policy

- · Reduce gap between water supply and demand.
- Ensure water supports community values.
- Keep cost of water manageable.
- Build resilience to natural hazards.
- Protect and enhance ecosystem services.
- Support economic development goals.

Opportunities for integrating water & land use.

Long-Range Planning



Policies...

Water Adequacy & Alternative Supplies



- Water allocation policies
- Conservation tap fees
- Greywater
- Potable water uses

Urban Form & Built Environment



- Zoning for density and infill
- Building codes
- Landscape ordinances

Watershed Health



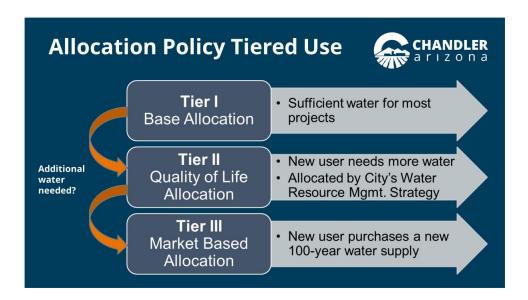
- Low impact development & green infrastructure
- Sensitive lands protection
- Cluster subdivisions

Post-Occupancy Demand Management



- Water rates
- Retrofit on resale

Water Allocation Policies



Chandler implemented a Water Allocation Policy that requires large users (businesses that use large quantities of water), that do not meet the strategic goals found in the Master Plan, to purchase and provide any additional water needed to meet their 100-year assured water supply requirements.

NEWS: BUSINESS

Data centers are proliferating. So are concerns about their effects on Colorado's environment.

Al and other growing tech sectors are driving demand for bigger. more powerful data centers, and Colorado is obliging. How does their demand for all that power coexist with climate goals?











"Recently, some companies operating data centers in the United States, including New Mexico, Arizona, and South Carolina, have faced pushback from local communities and water conservation stakeholders competing for the same water resources," a Sutainalytics report said. While Colorado and the West have suffered a 20-year drought and there is haggling over the future of the dwindling Colorado River, a hyperscale data center with evaporative cooling can, according to Dglt, use more than 200 million gallons of water a year, about 550,000 gallons a day — enough to supply 1,200 households of four to five people for a year."

Zoning for Density and Infill



Water for a Growing Bay Area

How the region can grow without increasing water demand

PAGIFIC INSTITUTE New infill multifamily housing tends to be the most waterefficient type of housing because:

- Multifamily housing tends to have a smaller lot size per housing unit (reduces per-capita amt of water for outdoor landscaping)
- Infill development often occupies space that was already irrigated (adding ADU or converting single family to duplex)
- New construction tends to be more efficient than older buildings (complies with current codes)

The New York Times

NEWSLETTER

The Morning

America's Affordable Housing Crisis

The housing crisis is likely to be solved in cities and states, not Washington.

March 27, 2024, 6:42 a.m. ET

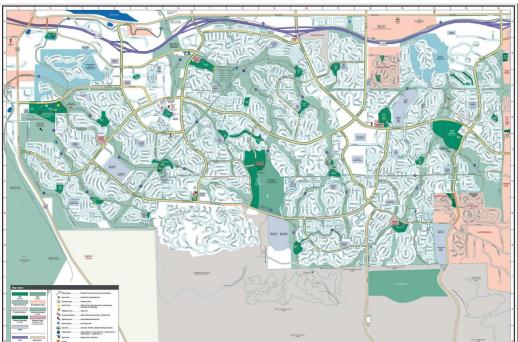
"States are also trying to alter zoning rules to allow a greater diversity of units in more neighborhoods. One way is to allow more backyard homes — known as granny flats.... Another is to shrink lot sizes so several smaller cottages can be built on parcels currently reserved for only one larger home. Cities and states are also altering zoning rules so duplexes and triplexes can be built in neighborhoods that are currently designated for single-family homes. All these methods aim to increase density within a city's existing footprint."

Cluster Subdivision



- Grouping or directing new development to relatively less sensitive areas within a subdivision, away from more sensitive areas like open space, steep slopes, or floodplains.
- Protect open space or environmentally-sensitive lands such as rivers or drainageways.
- Generally does not increase the overall density of a development but rather allow dwellings to be grouped (or "clustered") on smaller lots away from sensitive areas.

Recreational Benefits





West Big Dry Natural Area on a cold and cloudy winter day in Highlands Ranch

Retrofit on Resale

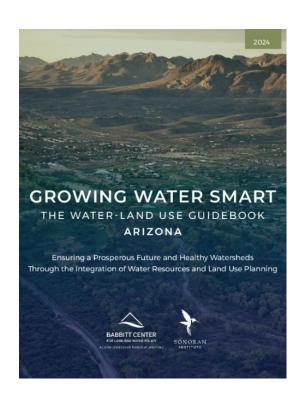


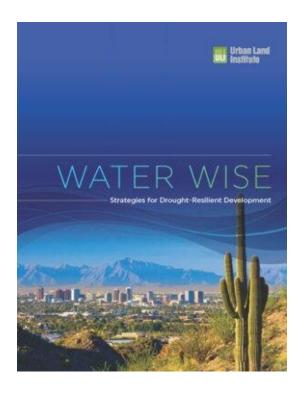
Requires retrofit of fixtures such as toilets, showerheads, faucets, urinals, etc. upon sale of any existing structure. Before a change of ownership, the seller must replace any inefficient fixtures with water-conserving ones.

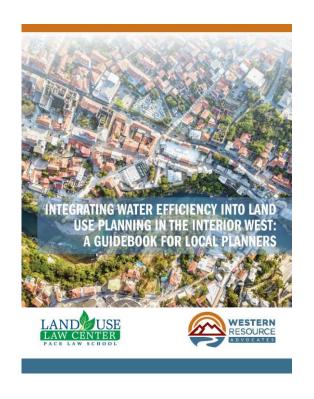


The average family spends more than \$1,000 per year in water costs, but can save more than \$380 annually from retrofitting with WaterSense labeled fixtures and ENERGY STAR certified appliances (epa.gov/watersense/statistics-and-facts)

Guidance on Water-Smart Policies







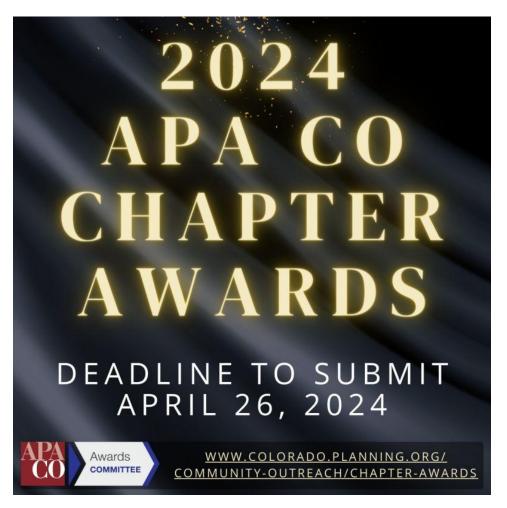
I'll paste links to these in the chat.

Interested? Attend a Growing Water Smart Workshop.

- 2.5 days
- No cost to participating teams
- 4-6 communities attend per workshop
- Attend with an Inter-Disciplinary Team
- Assess Current Conditions
- Set Goals
- Identify Opportunities
- Develop a Water-Smart Message
- **Establish an Action Plan**
- Implement (with funding assistance)



Ready to share your community's successes?



GROWING WATER SMART AWARD

This award, juried and presented by the Sonoran Institute and the Babbitt Center for Land and Water Policy, a center of the Lincoln Institute of Land Policy, recognizes Colorado towns, cities, and counties that have made exceptional strides in integrating water conservation, efficiency, quality, or reuse into their land use plans or policies.



Sonoran Institute

Est. 1990

Connecting people and communities with the natural resources that nourish and sustain them.

sonoraninstitute.org

Growing Water Smart is a training & assistance program that empowers local leaders to implement plans and policies that support community and regional water resilience.







Upcoming Workshops:

- Southern California: June 3-5, 2024
 (prioritizing water retailers and cities served by San Bernardino Valley Municipal Water District)
- Nogales, AZ and Nogales, SON: June 11-13, 2024
- Northern Colorado: September 9-11, 2024 (prioritizing Northern Water allottees)
- Western Slope, Colorado: tent. February, 2024 (prioritizing communities in Colorado River District and Southwestern Water Conservation District area)

growingwatersmart.org

Thank you!

www.growingwatersmart.org

Waverly Klaw

Director, Growing Water Smart

Sonoran Institute

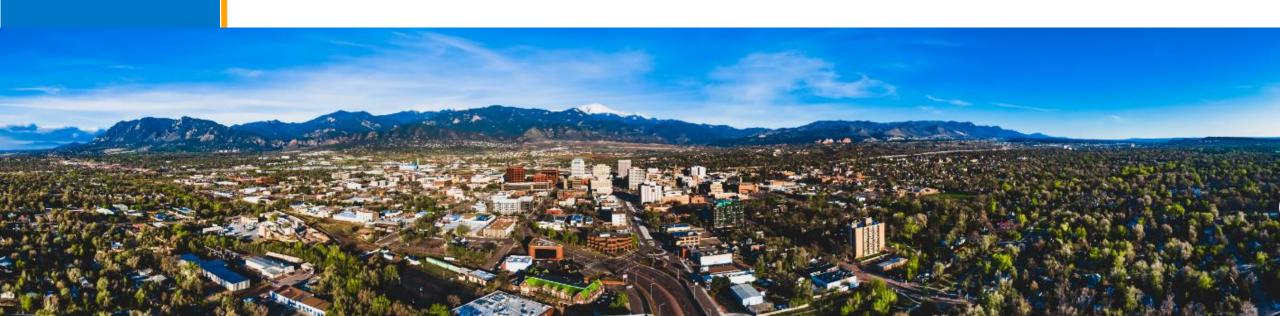
wklaw@sonoraninstitute.org





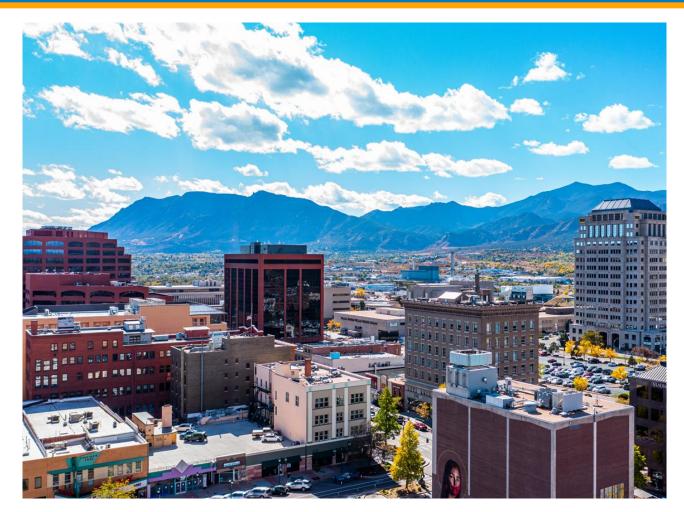
Unified Development Code (UDC)

RetoolCOS PROJECT



Colorado Springs

- Roughly 200 square miles
- High elevation, semi-arid prairie and foothills
- 500,000 residents
- 210,000 dwelling units
- 5 military installations
- 125,00 acres in city limits
- 27,000 parcel acres undeveloped
- ≈50% growth by 2050



RetoolCOS Project – Why Now?

City Council Adoption – February 14, (8-1 approval vote) Effective Date – June 5, 2023 **SmartCOS** Planning Program

Focus on Modernization and Sustainability

Landscape

- Limitation to high-water use turf grass
- Revised Landscape Policy Manual

Building and Development Incentives

- LEED accreditation, cool roofs
- TODs

Parking

- General reductions
- 11 options for further reducing

Lighting Requirements

Inspired by Dark Skies

Building Architecture

Option for public art

New Zone Districts

- R-Flex Districts
- Mixed-Use District conversions

Residential Districts

Current Residential Districts	Retool Residential Districts Proposal
A: Agriculture	A: Agriculture
R: Estate – Single-Family	R-E: Single-Family – Estate
R-1 9000: Single-Family	R-1 9: Single-Family – Large
R-1 6000: Single-Family	R-1 6: Single-Family – Medium
R-2: Two-Family Residential	R-2: Two-Family Residential
R-4: Multi-Family (med density)	R-4: Multi-Family (med density)
R-5: Multi-Family (high density)	R-5: Multi-Family (high density)
	R-Flex Low
	R-Flex Medium
	R-Flex High

Mixed-Use Districts

Current Commercial Districts	Retool Commercial Districts Proposal
OR: Office Residential	
OC: Office Complex	MX-N: Mixed-Use Neighborhood Scale
MU-NC: Mixed-Use Neighborhood Center	
SU: Special Use	MX-T: Mixed-Use Transition
C-5: Intermediate Business	MX-M: Mixed-Use Medium Scale
PBC: Planned Business Center	
MU-CC: Mixed-Use Commercial Center	
C-6: General Business	
MU-R EC: Mixed-Use Regional Employment	MX-L: Mixed-Use Large Scale
Center	
	MX-I: Mixed-Use Institutional
FBZ: Form Based Zone	FBZ: Form Based Zone (Regulating Plan District)
TND: Traditional Neighborhood Development	
PCR: Planned Cultural District	* Potential for PCR properties to become approved PDZs

New Zone Districts

Residential Flex (R-Flex) Districts

 Opportunities for smaller lots and mix of housing types

Mixed Use Districts

 Conversion of existing commercial districts to mixed use (permission of developing residential)



Foothills Farm Midtown Collection – R-Flex Medium Density Inspiration (5-16 DU/acre)

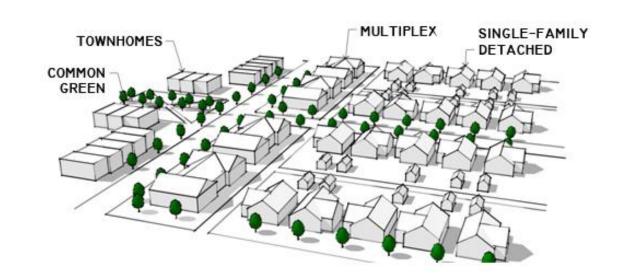
R-Flex Districts

Why?

- Attempted to update uses permitted in existing residential districts.
 - "Highest" density SF district R-1 6 = 6,000 sf lot
 - Euclidean zoning
- Recognized crucial need for different approach to permitted uses for housing.
- Overabundance of PDZs.
- Less infrastructure necessary.

Where?

Has not been applied to any property
– rezoning request.



What?

- R-Flex Low up to 6 DU/acre
- R-Flex Medium 5 to 16 DU/acre
- R-Flex High 15 to 30 DU/acre

Mixed-Use Districts

Inclusion of residential use dependent on intensity of MX District

Single-Family

 Permitted in MX-N and MX-T but Conditional in MX-M and MX-I

Multi-Family

Conditional in MX-N and MX-T but Permitted in MX-M, MX-L, and MX-I

NOT a mandatory inclusion of residential use!

Could do commercial OR residential OR combination of both.

Benefits

- No need to rezone property to include mix of uses
 - Euclidean zoning!
- Less time and financial burden on applicant
- Creative use of vacant properties
 - S Academy properties
- LESS INFRASTRUCTURE! (in most cases)
 - Outliers conversion of existing buildings, retrofitting sites (ex – irrigation)

Major Differences...

- MX Districts → Permitted inclusion of residential in former commercial district(s)
- R-Flex Districts → Mix of residential uses but no commercial component

Housing Options – Uses

Tiny House Community

- Subsection 7.3.301.D
- New use option
- Requirements for community size, open space, storage facilities, internal access/circulation
- Conditionally permitted in R-Flex Districts, MX-N, and MX-T

Campground or Recreational Vehicle Park

- Permitted in MX-M, MX-L, MX-I, PF, and PK Zone Districts
- Previous use did not appear many current parks are in County or former-County property

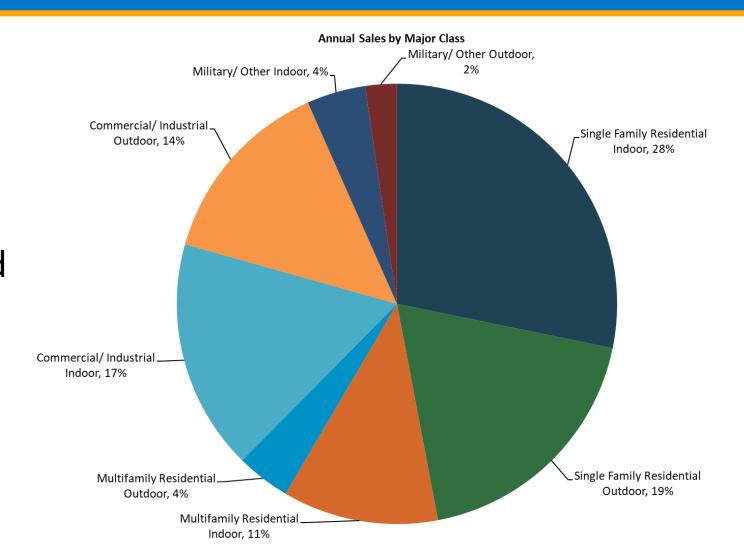
ADUs

No changes to requirements (not part of RetoolCOS project scope)



Colorado Springs Utilities

- Four-service utility providing water, wastewater, electric, and natural gas
- Majority of water supplied by Colorado River
- 24 billion gallons of potable water per year



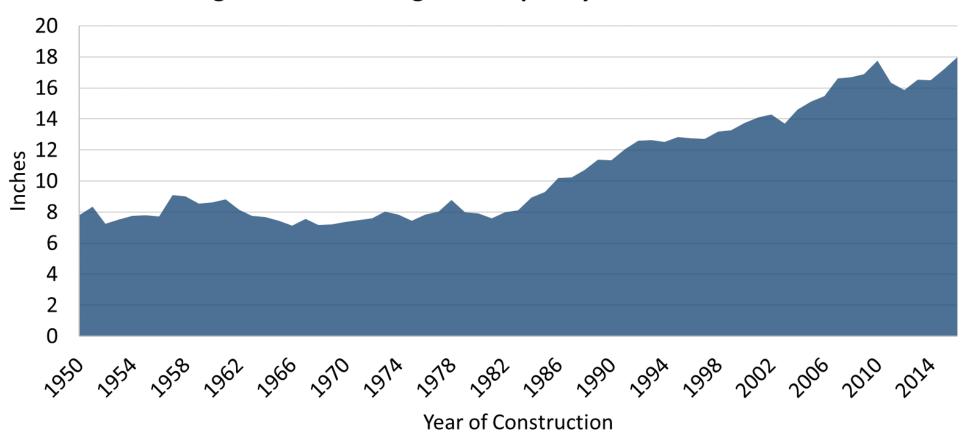
Water Use History

- Population has doubled since 1985, yet water demands are at 1985 levels
- Residential sales per customer are down 40%, non-residential 35%
- Conservation, recurring drought, and increasing prices



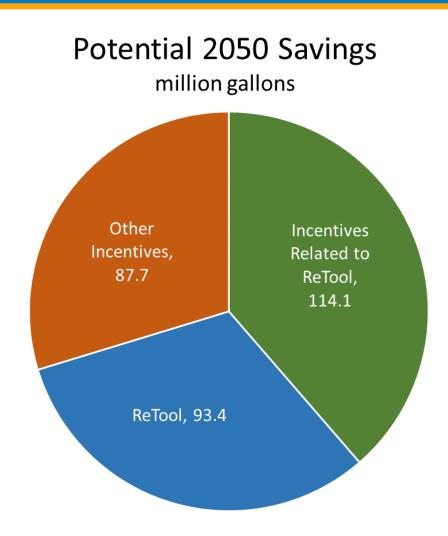
Irrigation Rates by Vintage

Average Residential Irrigation Depth by Year of Construction



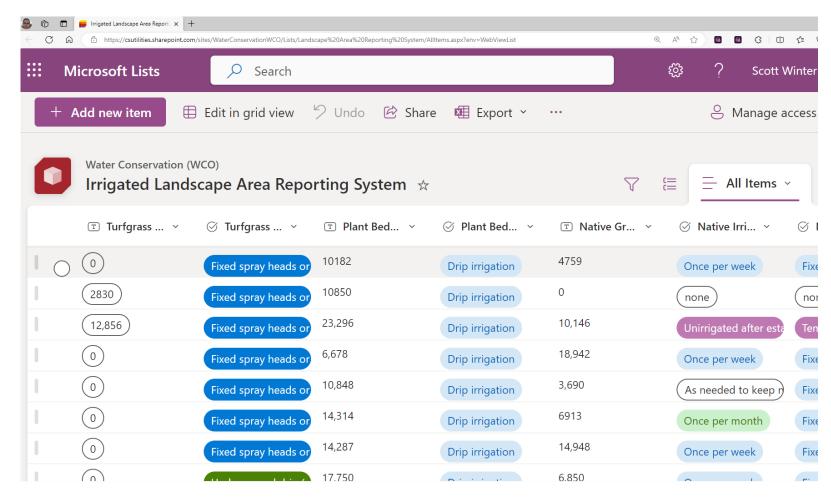
2022 Water Efficiency Plan

- Targeting more than 1.9 billion gallons of additional annual savings by 2050.
- Roughly 300 million gallons from new construction codes, ordinances, and incentives –
 - 200 million directly or indirectly resulting from the UDC regulations; and
 - Additional savings will come from rate design supported by the UDC regulations.



UDC-Supported Data Collection

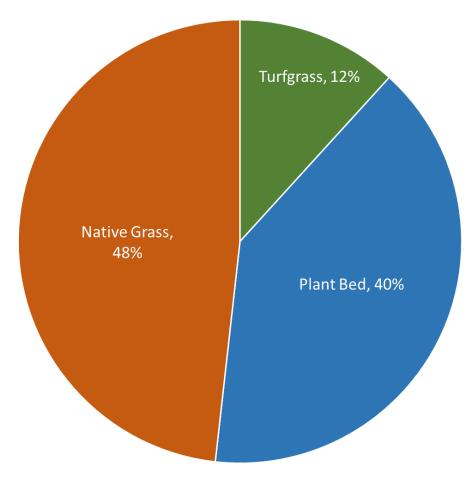
- Collect irrigated area composition and irrigation type data.
- Estimate irrigation "budget" for each development.
- Compare to actual install and consumption.
- Data will inform rate and other programs.



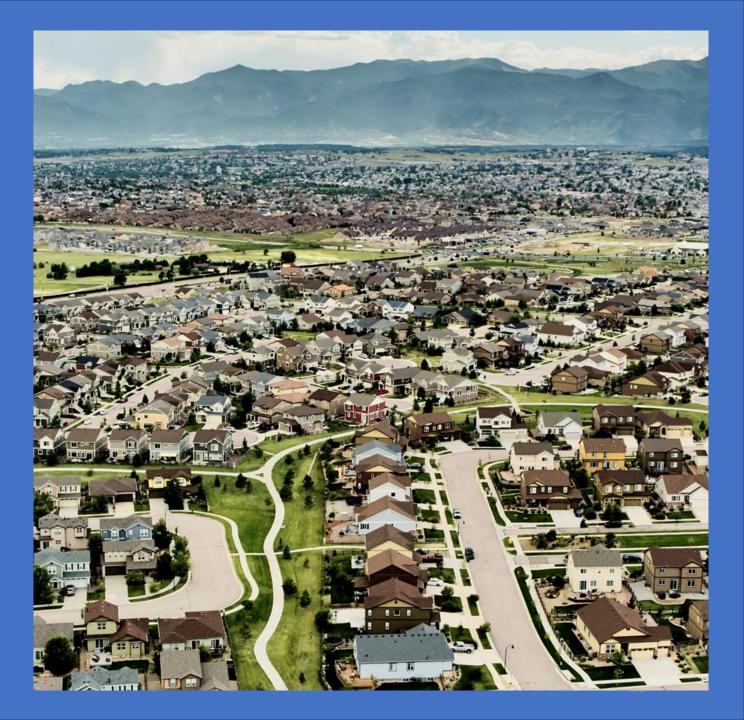
UDC Required Turf Limits

- Turfgrass comprised 17% of irrigable acres in new development prior to the adoption of the UDC.
- Efficiency savings projections assumed a reduction to 14% on average.
- Through 9 months, turfgrass comprises less than 12% of new irrigable acres.





Questions?





Group Discussion & Updates

- Are there any other resources for policies? Should we create one? (clearinghouse)
- We started a list of resources for water wise landscapes
- Northern Water: new landscape templates
- 2024 Next Generation Water Summit on June 20-21: https://ngws.vfairs.com/en/#agenda





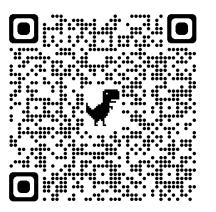
Programming Brainstorm

Let us know what you want for coalition meetings!

Cohort Programming Agenda	Subject Brainstorm
April/May/June 2024	Water pricing, tap fees, equity, and affordability (Benji Smith, AWE, WRA, CSU, DOLA)
July/Aug/Sept 2024	Water neutral development (AWE, Mary Ann Dickinson)
Oct/Nov/Dec 2024	Water and land use forecasting, data-driven planning that incorporates water (Babbitt Center)
Jan/Feb/March 2025	Water reuse (Water Reuse Foundation, Pacific Institute)









ULI Fall Meeting 2024 - Vegas

- ULI's Fall Meeting in Las Vegas: October 28-30, 2024
- The Lewis Center for Sustainability Forum will take place on October 28th from 8am to 3pm
- Forum with have Water Wise theme and will feature national experts
- Water Wise tours of the Venetian and Bellagio
- Updates and information available at https://fall.uli.org/future-meetings/





THANK YOU FOR JOINING US!

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