Urban Land Institute

# Water Wise Development Coalition

**Marianne Eppig, Sr. Director of Resilience, ULI**

November 6, 2024

# 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.


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# Agenda

- ULI welcome and introductions (5 minutes)
- Overview of water-neutral development and resources by **Mary Ann Dickinson**, Director of Land and Water Policy, Lincoln Institute of Land Policy (20 minutes, including Q&A)
- Water-neutral development case studies (20 min each, including individual Q&A):
  - Cambria, CA: **Tristan Reaper**, Program Manager, Cambria Community Services District
  - Ipswich, MA: **Rachael Belisle-Toler**, Water Resources Manager, Town of Ipswich
  - Santa Fe, NM: **Alan Hook**, Water Resources Coordinator, City of Santa Fe Water Division
- Resources & updates (5 minutes)

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LINCOLN INSTITUTE
OF LAND POLICY

# Planning for Water-Neutral Development

Mary Ann Dickinson

Water Wise Development Coalition, November 6, 2024

# The Problem

- Many cities in North America are already challenged to meet their customer demands for water
- Growing population and economic growth will place even more pressure in arid and water-short areas
- As drought and water shortages occur, residents raise the issue about available water for new development when they are being restricted
- Some communities cannot accommodate growth with current water supplies, especially as drought intensifies

The Mercury News

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## East Palo Alto imposes development moratorium due to lack of water

Daily Democrat

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## State Water Board Issues Moratorium on New Water Connections

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## Some home building halted as counties react to water-rights case

Originally published December 10, 2016 at 1:52 pm | *Updated December 10, 2016 at 3:05 pm*

**As counties across Washington respond to a far-reaching state Supreme Court decision involving water rights, angry and frustrated property owners are finding they cannot depend on groundwater wells to build new homes as they have in the past.**

By PHUONG LE
*The Associated Press*

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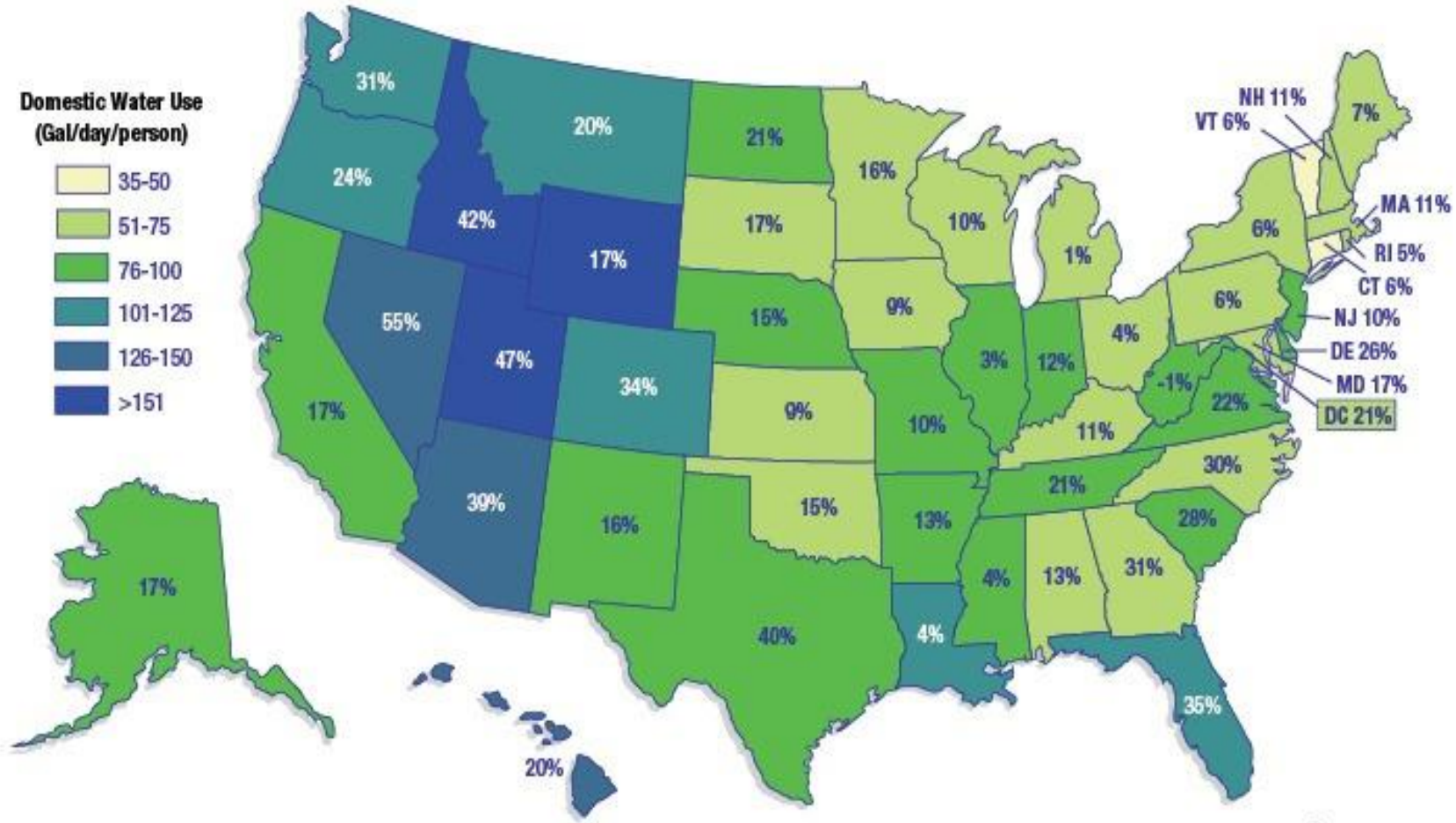
As counties across Washington respond to a far-reaching state Supreme Court decision involving water rights, angry and frustrated property owners are finding they cannot depend on groundwater wells to build new homes as they have in the past.

# Domestic Water Use in Gallons per Day per Person and Percent Population Growth from 2000 to 2020




Sources:
U.S. Geological Survey, Circular 1441
U.S. Census Bureau, Historical Population Change Data (2000-2020)

# Another Problem

- Water utility planning and local community comprehensive planning have historically not been well connected
- Strong silos have existed for decades with minimal staff interchange
- Water utility managers historically have been nervous about looking like they are “social engineers” if they get involved in local planning efforts
- This disconnect occurs despite clear evidence that a lack of coordination is a disservice to local planning needs and results in a lack of focus on the very real water and land use nexus

# Land Use Coordination Study

- **Only 9 states** require water utilities to incorporate land use planning into their water plans but methods vary considerably: California, Colorado, Connecticut, Kentucky, Maryland, Rhode Island, Tennessee, Utah and Washington
- **10 states** require community land use plans to incorporate water utility plans or water quantity and quality concerns: Delaware, Florida, Maryland, Minnesota, Montana, Nevada, Rhode Island, South Carolina, Virginia and Washington
- **Only 3 states** provide by statute funding or other assistance to help support coordination between water utilities and land use planners: California, Colorado, and Maryland

# More Land Use Coordination Issues

- **5 of the 10 states** expressly mention water supply in statutes or regulations that specify the required content of land use plans
- Each of the 10 states requires unique water elements to be included in land use plans (such as stormwater, groundwater, wetlands, and wellhead considerations)
- **Only 6 states** require that water utilities directly coordinate with land use planners in their communities: Connecticut, Maine, Rhode Island, Tennessee, Virginia, Washington

# For More Information

**Download the Report**

https://www.lincolninst.edu/publications/working-papers/examining-water-land-use-connection-in-water-utility-planning

Receive notice of *Planning and Practice for Integrating Land Use and Water Management* and future publications at:

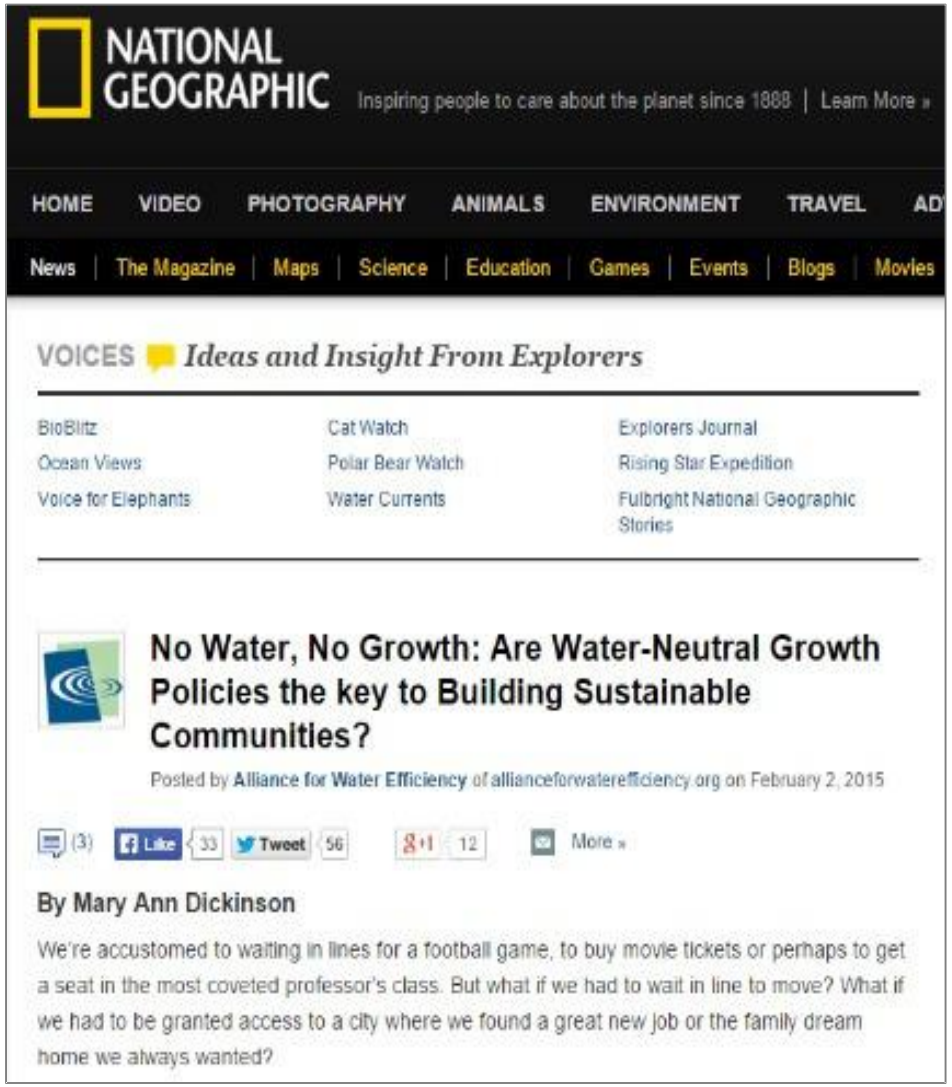
https://go.lincolninst.edu/sign-up-for-land-lines

# A Solution to Scarcity: Water Offsets

- Can allow growth without increasing system-wide water consumption across a community or a water supply service area
- Can be a combination of on-site water efficiency and off-site water efficiency
- Can reduce or completely eliminate impact of new development on water supply
- Can help avoid building moratoriums in resource-constrained communities

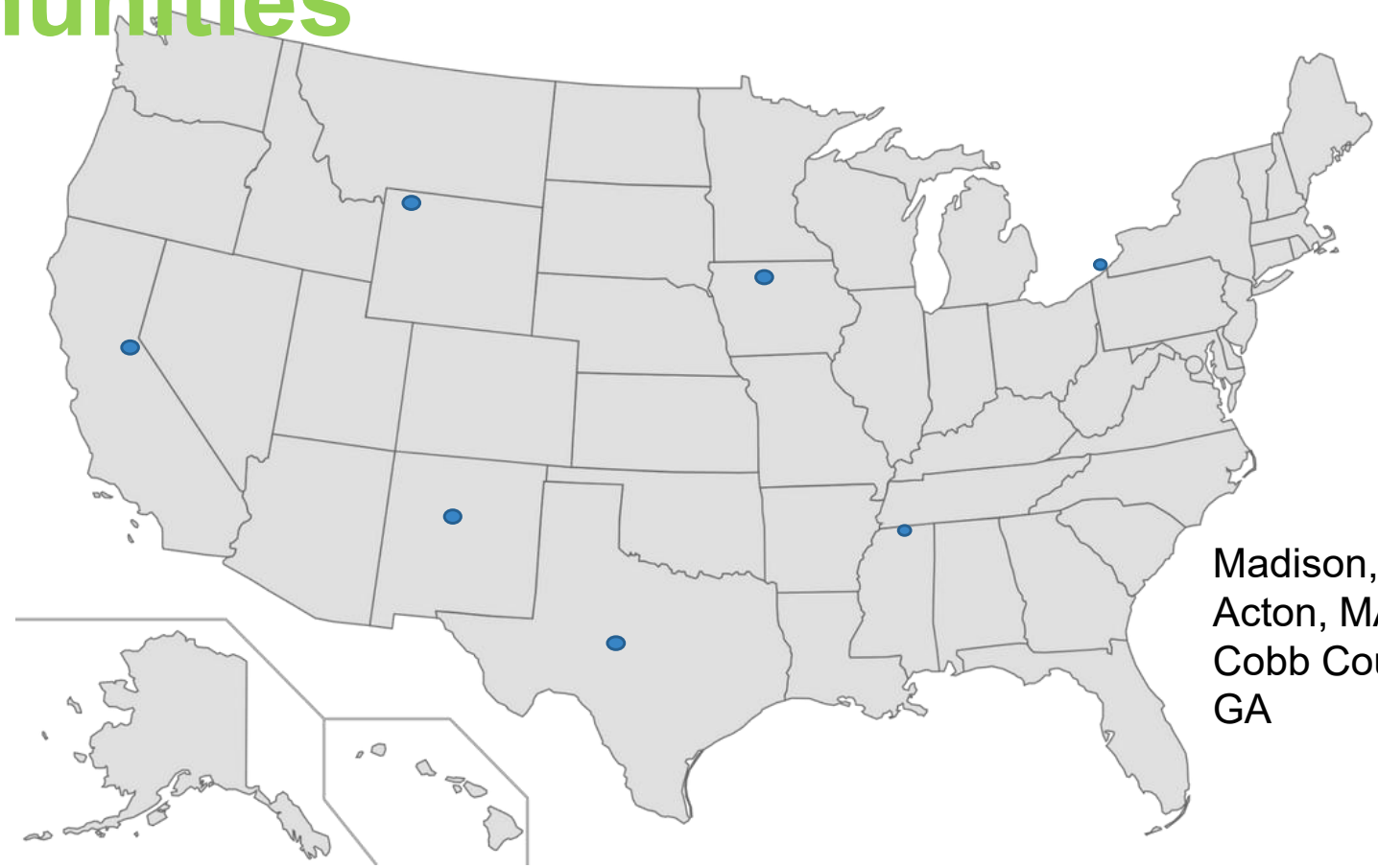
# Water-Neutral Growth

- 3-year project to create a national ordinance development tool that can be tailored to create a customized water demand offset approach
- Partners: AWE, Environmental Law Institute, and River Network
- Worked with 7 partner cities in the US to vet the approach



# Partner Communities

Bozeman, MT
San Francisco, CA
Albuquerque, NM
Austin, TX



Madison, WI
Acton, MA
Cobb County, GA

# Launched “Net Blue” Toolkit

Alliance for Water Efficiency

PROMOTING AN EFFICIENT & SUSTAINABLE WATER FUTURE

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## Net Blue: Supporting Water-Neutral Growth

**Section:** Water and Land Use Planning


Net Blue is a collaborative initiative of the Alliance for Water Efficiency (AWE), the Environmental Law Institute (ELI), and River Network to support sustainable community growth. The project team members developed a model ordinance that communities can tailor and customize to create a water demand offset approach meeting local needs. Communities in different regions throughout the United States were consulted to help develop the model ordinance and the offset components, and to ensure that the program is adaptable to many different political climates, legal frameworks, and environmental challenges.

The Net Blue Project is divided into four parts:

**1. Initial Offset Research**

Report entitled, *Water Offset Policies for Water-Neutral Community Growth*, which reviewed 13 communities throughout the United States that currently have a water demand offset policy or water neutral growth policy in place. These policies require offsetting the projected water demand of new development with water efficiency measures to create a "Net Zero" or neutral impact on overall service area demands and water use. The report found that the most common scenario where this has been applied entails issuing building permits for development that requires offset of the new water use through both on-site water efficiency measures and replacement of inefficient fixtures in pre-existing facilities. In numerous California communities and in cities ranging from Santa Fe, New Mexico to Sharon, Massachusetts, water demand offset programs have been utilized to help enable new construction that likely would have been prohibited due to supply constraints. The report also contains a literature review related to this topic, and information on communities that had a water demand offset policy in the past.

**2. Model Ordinance**

A template for a model ordinance that requires or incentivizes offsetting the impact of new development's water use via water efficiency measures. ELI led the work on developing the model ordinance. Building on AWE's initial offset research report, ELI did the following: (1) Analyzed the legal language used in existing water offset ordinances; (2) Identified potentially useful supplemental language in other ordinances; (3) Assessed a variety of institutional configurations that may influence the adoption and implementation of a water offset ordinance; and (4) Examined legal opportunities for and constraints on expanding the concept to new places. The final work product resulted in a model ordinance worksheet, a user's guide, and three examples of customized ordinances. Due to the variety of circumstances that occur in a county, municipality, or utility, and the diversity of legal constraints and authorities that can dictate the form of such an ordinance, a "one size fits all" approach does not work in this context. Thus, the model ordinance is in the form of a

# Net Blue Toolkit

1.Model Ordinance Worksheet 2.Model Ordinance User Guide 3.Three Ordinance Examples 4.Offset Methodology Workbook 5.Offset Methodology User Guide 6.Three Offset Examples matching the ordinance examples 7.Outreach Materials

# The Model Ordinance Worksheet

- We built an ordinance-development tool, not just a model ordinance, because:
  - Variety of settings: constraints, governing entities, enabling laws
  - We anticipate a variety of users (not just lawyers)
  - It is intended to assist with outreach
- This tool is intended to help the users identify and think about critical issues in their own communities

# The Ordinance Sections

Establishing the Legal Basis
- Purpose
- Findings
- Authority

Fashioning the Ordinance
- Requirement and Applicability or Incentive
- Definitions Determining the Offset Amount Identifying the Offset Activities

Enforcing the Ordinance
- Compliance with the Offset Verification Monitoring (optional) Enforcement

Options for the Ordinance
- Offset Credit Bank (optional) In-Lieu Fee (optional) Administrative Fees (optional) Modifications (optional)

Administering the Ordinance
- Appeals Severability Consistency with Other Laws Effective Date

NET BLUE WATER NEUTRAL GROWTH

**Purpose:**

> The declaration of an ordinance's purpose primarily helps reviewing courts and officials charged with its administration to interpret the ordinance. A purpose section also can inform (a) elected officials as to why they are adopting the ordinance, and (b) the general public and property owners as to the intent of the ordinance.
> *Reference ordinances: Dungeness River Watershed; Monterey County; Morro Bay (Ch. 13.20); San Luis Obispo County (Title 26); Soquel Creek Water District*

The purpose of this ordinance is to: [select all that apply]

- Protect and promote the public health, safety, and general welfare
- ☐ Ensure that there is enough water at all times to meet the basic needs of the community, including fighting fires
- ☐ Establish and assist in achieving sustainability goals and objectives
- ☐ Manage the demand for more water in identified city, county, or district, to ensure that [select the applicable one]
  - ☐ demand for water does not exceed available current or future supply
  - ☐ demand for water does not exceed the sustainable yield of the source
  - ☐ demand for water does not disproportionately adversely affect certain water user groups (e.g., low-income communities or the environment)
  - ☐ demands on water infrastructure do not exceed its capacity or impair its function
- ☐ Ensure a reasonable and orderly process and pace of making water supply / infrastructure capacity available to new users
- ☐ Minimize the adverse effects on the community of limitations on identified city, county, or district's water supply / infrastructure
- ☐ Manage water / water infrastructure to better satisfy both present and future human needs
- ☐ Manage water / water infrastructure to be more resilient to drought

This section clarifies the effect that this ordinance has on other laws, to what extent it is limited by other laws and to what extent it supersedes other laws.
*Reference ordinances: Dungeness River Watershed; Morro Bay (Ch. 13.20)*

This ordinance shall not affect: [select one or more]

- ☐ Rights to surface water and groundwater in existence before the effective date of this ordinance
- ☐ Federal and tribal reserved rights
- ☐ State duty-to-serve laws
- ☐ Other rights, laws, or plans

[Select one or none]

- ☐ To the extent the provisions of this ordinance conflict with any provisions in the existing laws and codes, the provisions of this ordinance shall supersede and control.
- ☐ In the event of conflicts between the provisions of this ordinance and laws and codes, the more restrictive provisions shall prevail.

**Effective Date:**

This ordinance shall take effect [select one]

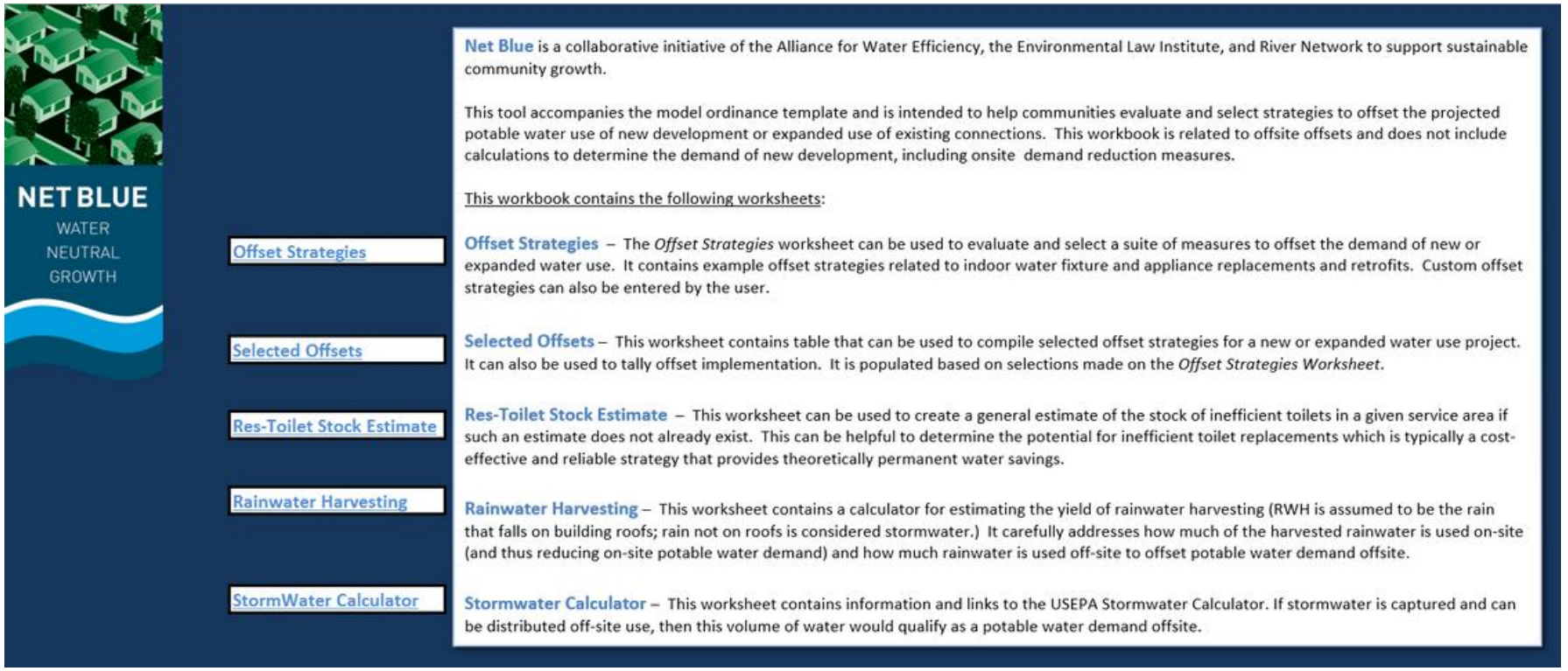
- ☐ immediately upon adoption.
- ☐ on date.
- ☐ upon triggering event (e.g., declaration of drought).

Press Me

*Press this button only once, and please be patient.*
*It will take **up to a minute** to produce the new document (during which time Word will be unresponsive).*

# Offset Methodology Workbook

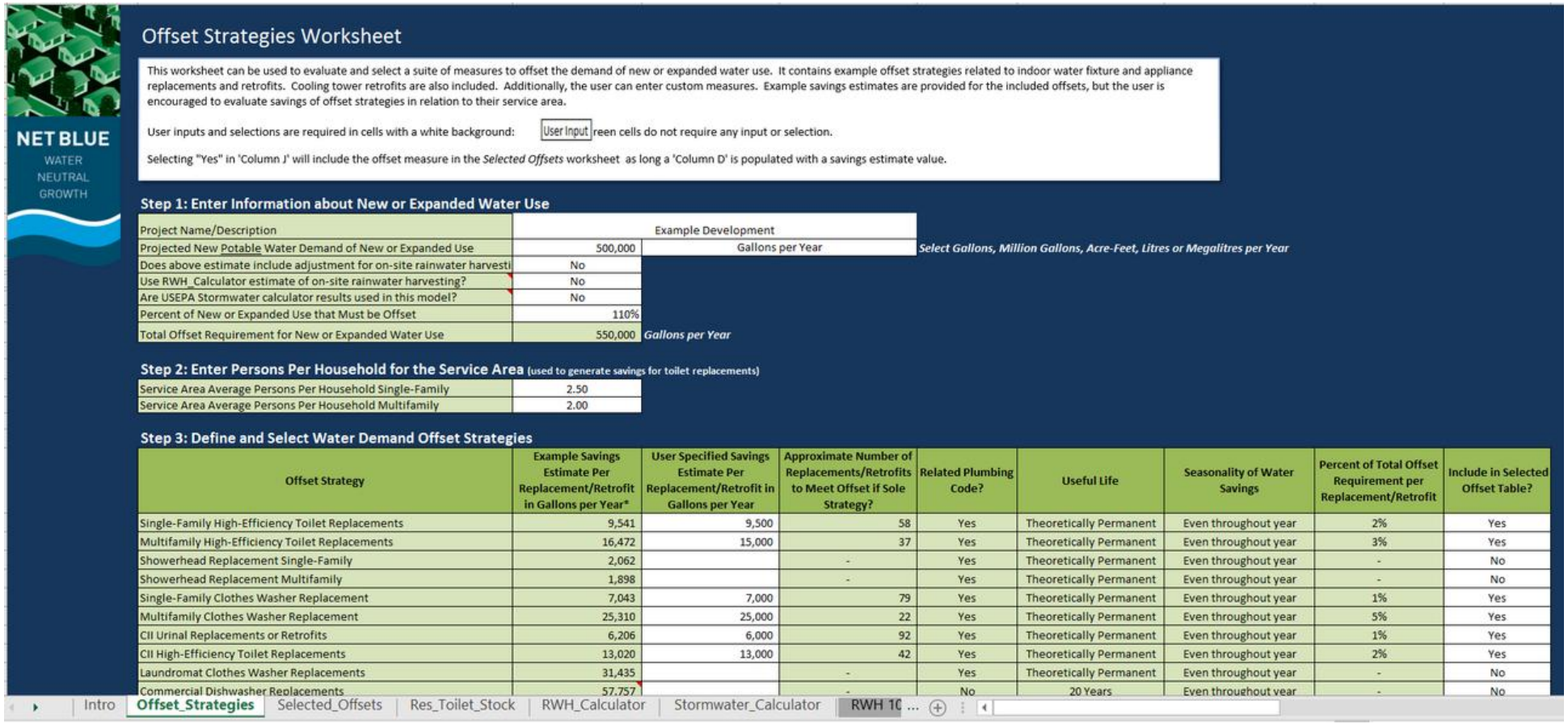
- Designed to help communities evaluate and select off-site offsets for development projects



# Offset Workbook Components

- New demand information
- Offset strategy evaluation worksheet
  - Water conservation strategies
  - Rainwater harvesting calculator
  - Stormwater capture calculator
  - Custom offsets
- Selected offsets worksheet
- Supplemental sheets
  - Inefficient toilet stock estimator
  - Baths and Half Baths Housing Data

# Offset Strategy Worksheet



NET BLUE
WATER
NEUTRAL
GROWTH

## Offset Strategies Worksheet

This worksheet can be used to evaluate and select a suite of measures to offset the demand of new or expanded water use. It contains example offset strategies related to indoor water fixture and appliance replacements and retrofits. Cooling tower retrofits are also included. Additionally, the user can enter custom measures. Example savings estimates are provided for the included offsets, but the user is encouraged to evaluate savings of offset strategies in relation to their service area.

User inputs and selections are required in cells with a white background: User Input reen cells do not require any input or selection.

Selecting "Yes" in 'Column J' will include the offset measure in the *Selected Offsets* worksheet as long a 'Column D' is populated with a savings estimate value.

### Step 1: Enter Information about New or Expanded Water Use

| | | | |
|---|---|---|---|
| Project Name/Description | Example Development | | |
| Projected New Potable Water Demand of New or Expanded Use | 500,000 | Gallons per Year | *Select Gallons, Million Gallons, Acre-Feet, Litres or Megalitres per Year* |
| Does above estimate include adjustment for on-site rainwater harvesti | No | | |
| Use RWH_Calculator estimate of on-site rainwater harvesting? | No | | |
| Are USEPA Stormwater calculator results used in this model? | No | | |
| Percent of New or Expanded Use that Must be Offset | 110% | | |
| Total Offset Requirement for New or Expanded Water Use | 550,000 | *Gallons per Year* | |

### Step 2: Enter Persons Per Household for the Service Area (used to generate savings for toilet replacements)

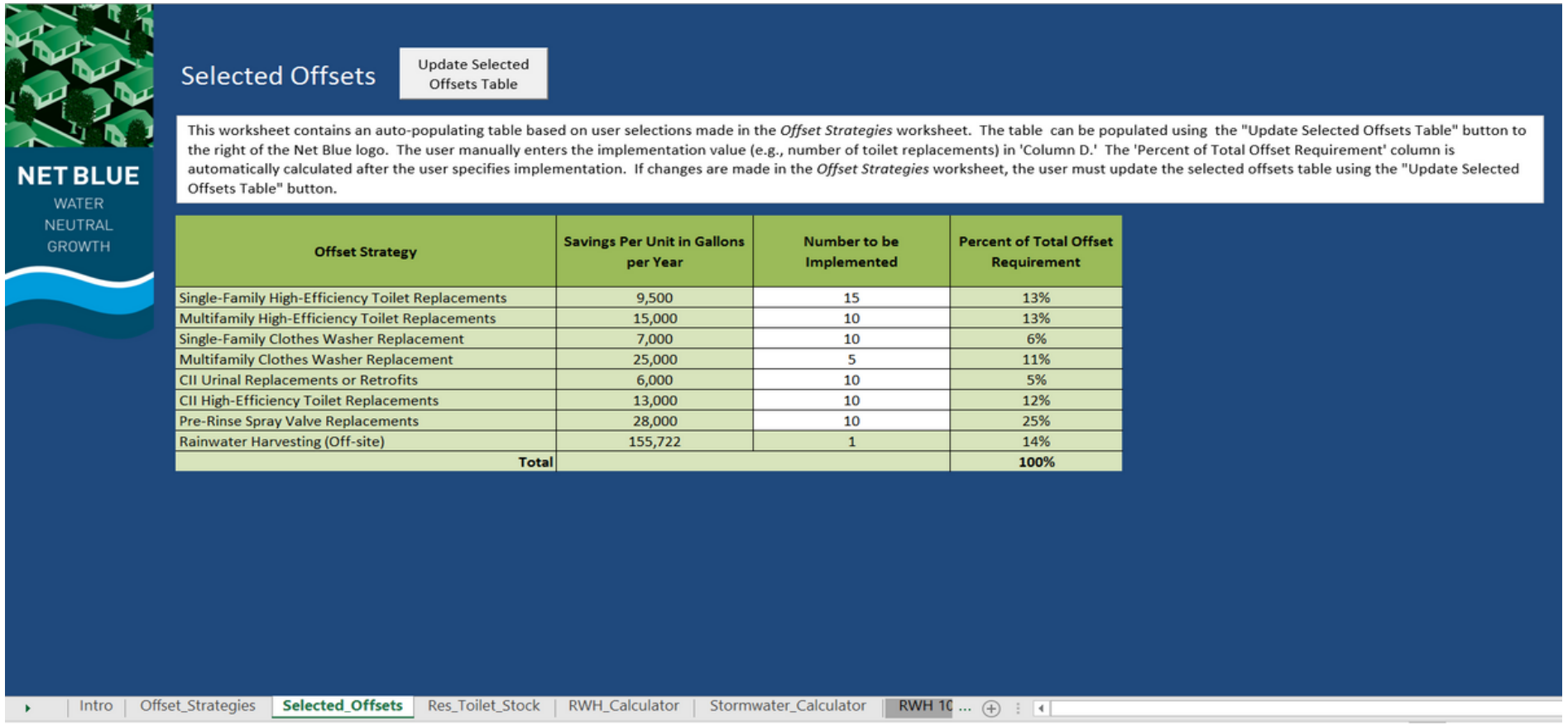
| | |
|---|---|
| Service Area Average Persons Per Household Single-Family | 2.50 |
| Service Area Average Persons Per Household Multifamily | 2.00 |

### Step 3: Define and Select Water Demand Offset Strategies

| Offset Strategy | Example Savings Estimate Per Replacement/Retrofit in Gallons per Year* | User Specified Savings Estimate Per Replacement/Retrofit in Gallons per Year | Approximate Number of Replacements/Retrofits to Meet Offset if Sole Strategy? | Related Plumbing Code? | Useful Life | Seasonality of Water Savings | Percent of Total Offset Requirement per Replacement/Retrofit | Include in Selected Offset Table? |
|---|---|---|---|---|---|---|---|---|
| Single-Family High-Efficiency Toilet Replacements | 9,541 | 9,500 | 58 | Yes | Theoretically Permanent | Even throughout year | 2% | Yes |
| Multifamily High-Efficiency Toilet Replacements | 16,472 | 15,000 | 37 | Yes | Theoretically Permanent | Even throughout year | 3% | Yes |
| Showerhead Replacement Single-Family | 2,062 | | - | Yes | Theoretically Permanent | Even throughout year | - | No |
| Showerhead Replacement Multifamily | 1,898 | | - | Yes | Theoretically Permanent | Even throughout year | - | No |
| Single-Family Clothes Washer Replacement | 7,043 | 7,000 | 79 | Yes | Theoretically Permanent | Even throughout year | 1% | Yes |
| Multifamily Clothes Washer Replacement | 25,310 | 25,000 | 22 | Yes | Theoretically Permanent | Even throughout year | 5% | Yes |
| CII Urinal Replacements or Retrofits | 6,206 | 6,000 | 92 | Yes | Theoretically Permanent | Even throughout year | 1% | Yes |
| CII High-Efficiency Toilet Replacements | 13,020 | 13,000 | 42 | Yes | Theoretically Permanent | Even throughout year | 2% | Yes |
| Laundromat Clothes Washer Replacements | 31,435 | | - | Yes | Theoretically Permanent | Even throughout year | - | No |
| Commercial Dishwasher Replacements | 57,757 | | - | No | 20 Years | Even throughout year | - | No |

Intro | Offset_Strategies | Selected_Offsets | Res_Toilet_Stock | RWH_Calculator | Stormwater_Calculator | RWH 1(

# Selected Offset Table




| Offset Strategy | Savings Per Unit in Gallons per Year | Number to be Implemented | Percent of Total Offset Requirement |
|---|---|---|---|
| Single-Family High-Efficiency Toilet Replacements | 9,500 | 15 | 13% |
| Multifamily High-Efficiency Toilet Replacements | 15,000 | 10 | 13% |
| Single-Family Clothes Washer Replacement | 7,000 | 10 | 6% |
| Multifamily Clothes Washer Replacement | 25,000 | 5 | 11% |
| CII Urinal Replacements or Retrofits | 6,000 | 10 | 5% |
| CII High-Efficiency Toilet Replacements | 13,000 | 10 | 12% |
| Pre-Rinse Spray Valve Replacements | 28,000 | 10 | 25% |
| Rainwater Harvesting (Off-site) | 155,722 | 1 | 14% |
| **Total** | | | **100%** |

# Example: Parker County Council

- County government with anticipated surface water shortage
- Offsets required of all site plan approval requests
- Compliance proof required 90 days after application approval
- Monitoring required to validate savings
- Offset amount: 100% (1:1)
- No in-lieu fee option

# Example Offset

- New Beer Brewery
- Projected new annual water demand: 1.75 million gallons
- Required Offset amount: 100% or 1:1 Offset strategy: On-site
- rainwater harvesting project to flush toilets and single family toilet replacements
- Offset amount: 100% of toilet flushing with rainwater; 330,150 excess gallons per year to be used as off-site credit; 129 single family toilet replacements

# Outreach Materials

- Fact Sheet Frequently Asked Questions All outreach items online
- Requests for toolkit online

www.net-blue.org

NET BLUE Frequently Asked Questions

A collaborative initiative of the Alliance for Water Efficiency, the Environmental Law Institute, and River Network
www.net-blue.org

**1. What is Net Blue?**

"Net Blue" is an approach to keep water use at the same or reduced levels as a community continues to develop. This concept of "water neutral" growth is achieved by integrating land use planning and water management to require or incentivize water use offsets (e.g., water efficiency retrofits) that will equal or exceed the additional demand of new development or redevelopment (residential and commercial). By choosing to adopt an ordinance or incentive that requires or encourages this approach, communities can stretch their water supplies, decrease the need for new infrastructure, and help ensure more water for fish, wildlife and recreation as well as provide other benefits. The Net Blue team has created a model ordinance toolkit to assist communities interested in tailoring this approach for their specific needs and context at www.net-blue.org

**2. Why might my community be interested in adopting Net Blue?**

There are many benefits to Net Blue. Communities with high growth and stressed water supplies are finding that water scarcity is affecting their economic development potential. Water demand offset policies thus offer communities a meaningful and sustainable way to enable population and economic growth without increasing overall water demands in a utility service area. Making sure that additional development does not further increase demand for highly treated water will reduce the need to pump and treat additional water and the need for new withdrawals from local water sources, and thus reduce expenses for the community. Another benefit of Net Blue is to defer new and costly infrastructure investment. Water efficiency is often the least expensive form of new supply, especially when compared to developing new reservoirs, diversions or other infrastructure. Even in communities that are not immediately water-stressed, reducing water use helps to build in additional resilience for the future by stretching existing supplies. Net Blue also can benefit recreation and fish and wildlife by keeping more water flowing in streams and rivers.

**3. How can Net Blue benefit local streams and rivers and other freshwater resources?**

In many places, rivers, streams, groundwater and other waterbodies are suffering from depletion when the amount of water withdrawn is greater than the amount returned. When this happens, fish, wildlife, recreation and downstream communities all suffer. Using a Net Blue approach can help to prevent further depletion of our rivers, streams and aquifers by reducing the current amount of water withdrawn or preventing the need for increased withdrawals. Although this approach may not automatically translate into more water for our rivers, it is one important tool in the toolbox to reduce demand for highly treated water, taking some pressure off of our waterways and groundwater resources.

# Water and Planning Network

- Free network of water and land use professionals created by the American Planning Association
- You don’t need to be an APA member
- 550 Network members in US and Canada
- Bi-monthly newsletters and regular updates
- To Join: email water@planning.org

# Thank you

MARY ANN DICKINSON DIRECTOR OF

LAND AND WATER POLICY LINCOLN

INSTITUTE OF LAND POLICY

MADICKINSON@LINCOLNINST.EDU

LINCOLN INSTITUTE
OF LAND POLICY

Water Wise Development Coalition Meeting

# Water-Wise Development in Cambria, CA

**Tristan Reaper**

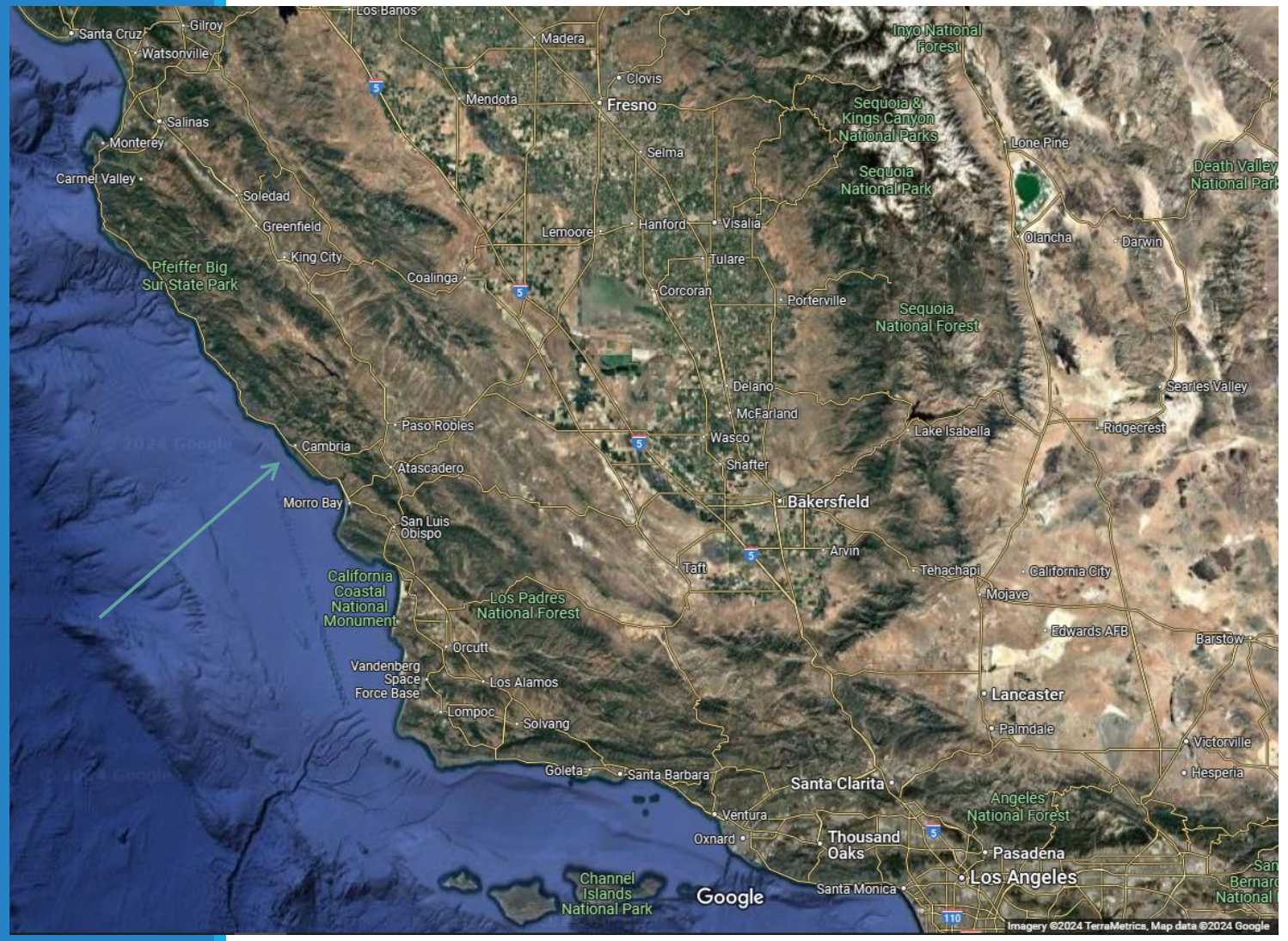
Program Manager – Utilities and Water Conservation
Cambria Community Services District

# Background on Cambria

- Geographic location
- Climate
- Water Supply Limitation and Reliability
- Current Water Situation
- Regulatory Environment

# Background on Cambria

- Geographic location



# Background on Cambria

- Geographic location

# Background on Cambria

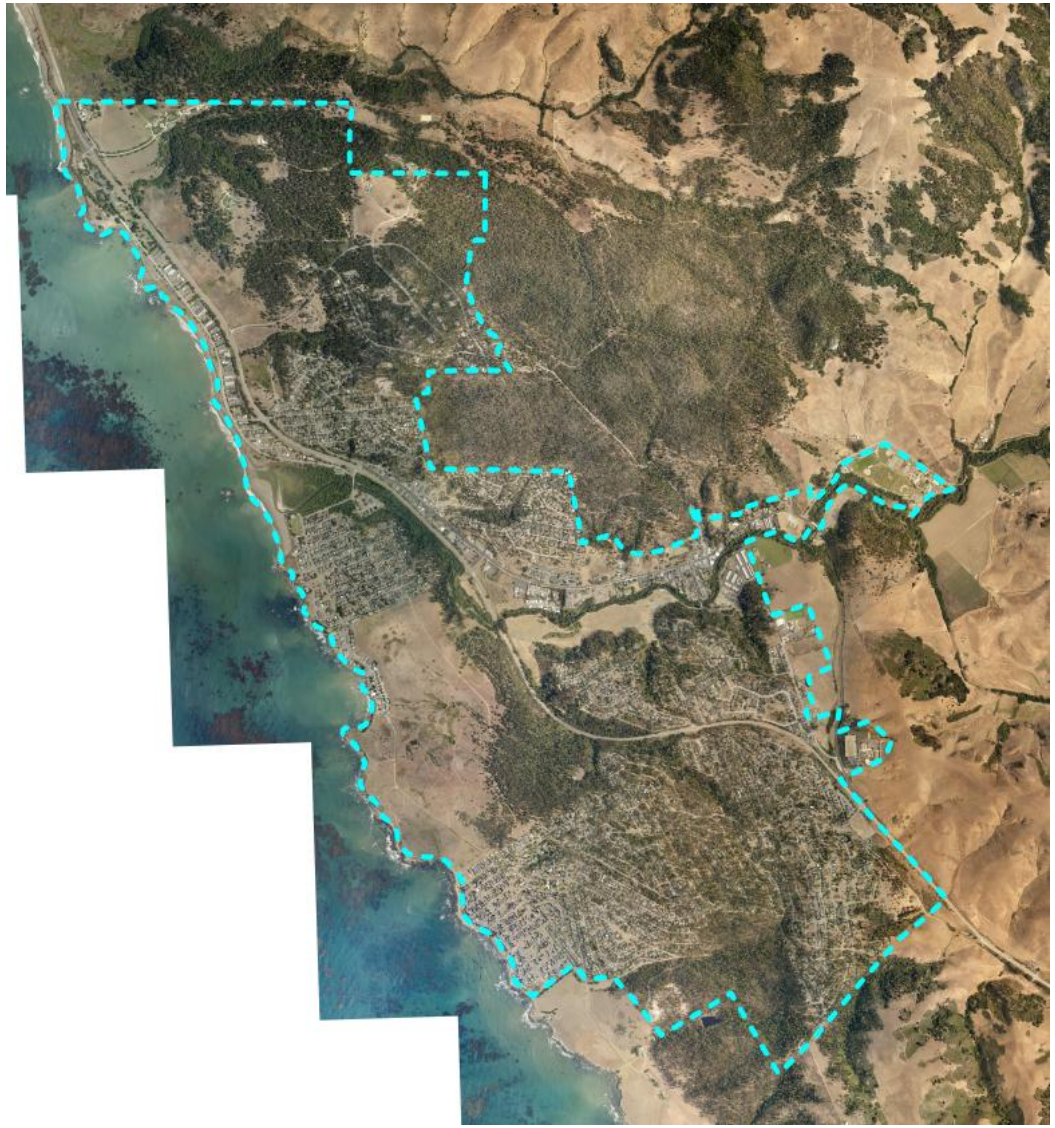
- Climate
  - Mediterranean climate
    - Wet season: Nov-March
      - Major rainfall months: Dec-March
    - Dry Season: April-October

# Background on Cambria

- Water Supply Limitation and Reliability
  - CCSD diverts ~500 AFY
  - Two aquifers
    - Santa Rosa Creek Groundwater Basin
    - San Simeon Creek Groundwater Basin
  - Limited storage
    - Narrow, shallow, and highly permeable aquifers
    - Quick recharge when streamflow resumes

# Background on Cambria

- Cambria CSD Service Area



# Background on Cambria

- Cambria Community Services District
  - CA Special District
    - Water and sewer service, fire protection, refuse collection, a small amount of street lighting, and some parks, recreation, and open space management
    - Located in the urban-wildland interface, with a significant portion of the community located within a native Monterey pine forest

# Background on Cambria

- Regulatory Environment
  - San Luis Obispo County
    - The local land use authority
    - Makes decisions based on the adopted Local Coastal Plan (LCP) and Coastal Zone Land Use Ordinance (CZLUO)
  - California Coastal Commission
    - Jurisdiction is the coastal zone
      - Effectively regulates development in the Coastal Zone
    - Local land use and development decisions can be appealed to the CA Coastal Commission by anyone

# Current Development Practices

- Moratorium on new water service connections – November 2001
  - Effectively halted development
  - Exemptions for “pipeline projects”
    - Retrofit to build was required
- Allowed development
  - Teardown and rebuild
  - Active Service Transfers
  - Remodels
  - Public-use buildings

# Water-Wise Development Practices

- Points and Points Bank
- Enforce CCSD Water Fixture Code
- Retrofit Upon Remodel, Expansion of Use, and Resale
- Cistern Installation Requirement

# Water-Wise Development Practices

- Points and Points Bank
- Used since the late 1980s
  - Allows either direct retrofits or the payment of in-lieu fees
    - Fees would be used by the CCSD to retrofit properties
  - Has been minimally utilized since 2013:
    - Cambria Pines Affordable Housing (2013)
    - Kingston Bay LLC Senior Residence Facility (2012)
    - Bookout residence (2019)

# Water-Wise Development Practices

- Current CCSD Code
  - More strict than the CalGreen Code
    - Bathroom faucets limited to 0.5 gpm
    - Kitchen/bar/utility sinks are limited to 1.5 gpm
    - Toilets are limited to 1.28 gallons per flush
    - Shower heads are limited to 1.5 gpm and must have a shut-off valve installed
    - Washing machines and dishwashers must be EnergyStar certified to 2015 or newer standards
    - New construction or extensive remodels must install a hot water system that meets US EPA WaterSense requirements

# Water-Wise Development Practices

- Retrofit Upon Remodel, Expansion of Use, and Resale
  - Properties must verify that water fixtures meet the current CCSD Code
  - The water savings from retrofit properties would be added to the points bank

# Water-Wise Development Practices

- Cistern Installation
  - Required on new construction or significant remodels when the lot size is greater than 8,000 sf.
  - Minimum size to meet the requirement: 3,000 gallons
  - Must have a distribution system

# Water-Wise Development Practices

- Takeaways
- The points bank was intended to allow limited development to continue
  - Appeal of projects to the Coastal Commission
    - Coastal Commission does not view it as a viable means of reducing water demand
  - No one wants to go through the trouble only to be denied at the Coastal Commission

# Questions?

**Presented By:**

Rachael Belisle-Toler

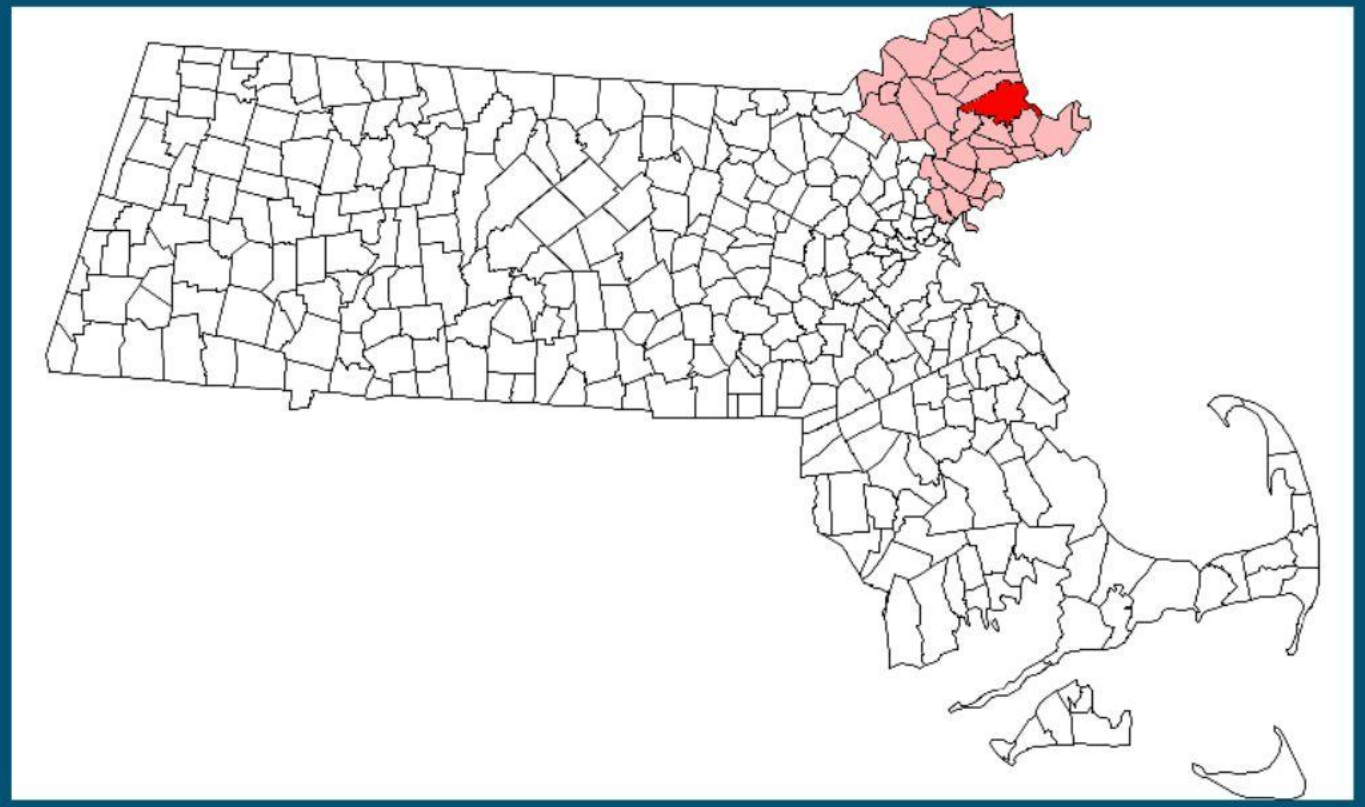
**Presented To:**

Water Wise Development Coalition

# water neutral growth

## local mitigation, community empowerment, and smart development

# IPSWICH MA



- Approximately 14,000 residents and growing
- Rely on 2 river basins for water supply (2 reservoirs and 5 wells)
- Historic droughts in recent years have prompted policy and management changes

*Town of Ipswich*
*Utilities Department*

# Ipswich: Rebates and WUMP Revenue

- WUMP = Water Use Mitigation Program
- Since 2022, our department has processed 154 rebates for water efficient products, representing $10,282 dollars
  - Water department rebates include WaterSense labeled products, in addition to rain barrels sold at a local nursery
- Since FY21, our Water Use Mitigation Program has generated just under $300,000.00
  - The WUMP partially funds water resources manager and water efficiency programming

# OUR APPROACH

## MITIGATE

-Water Use Mitigation Program funds education and outreach efforts
-Residential projects pay $1,500.00 per bedroom and commercial projects are charged based on Title V consumption calculations
-Currently in the processing or re-visioning the program to go further

## MODERNIZE

-Rebate programs for all Water Sense fixtures
-Rainwater harvesting programs and surveys

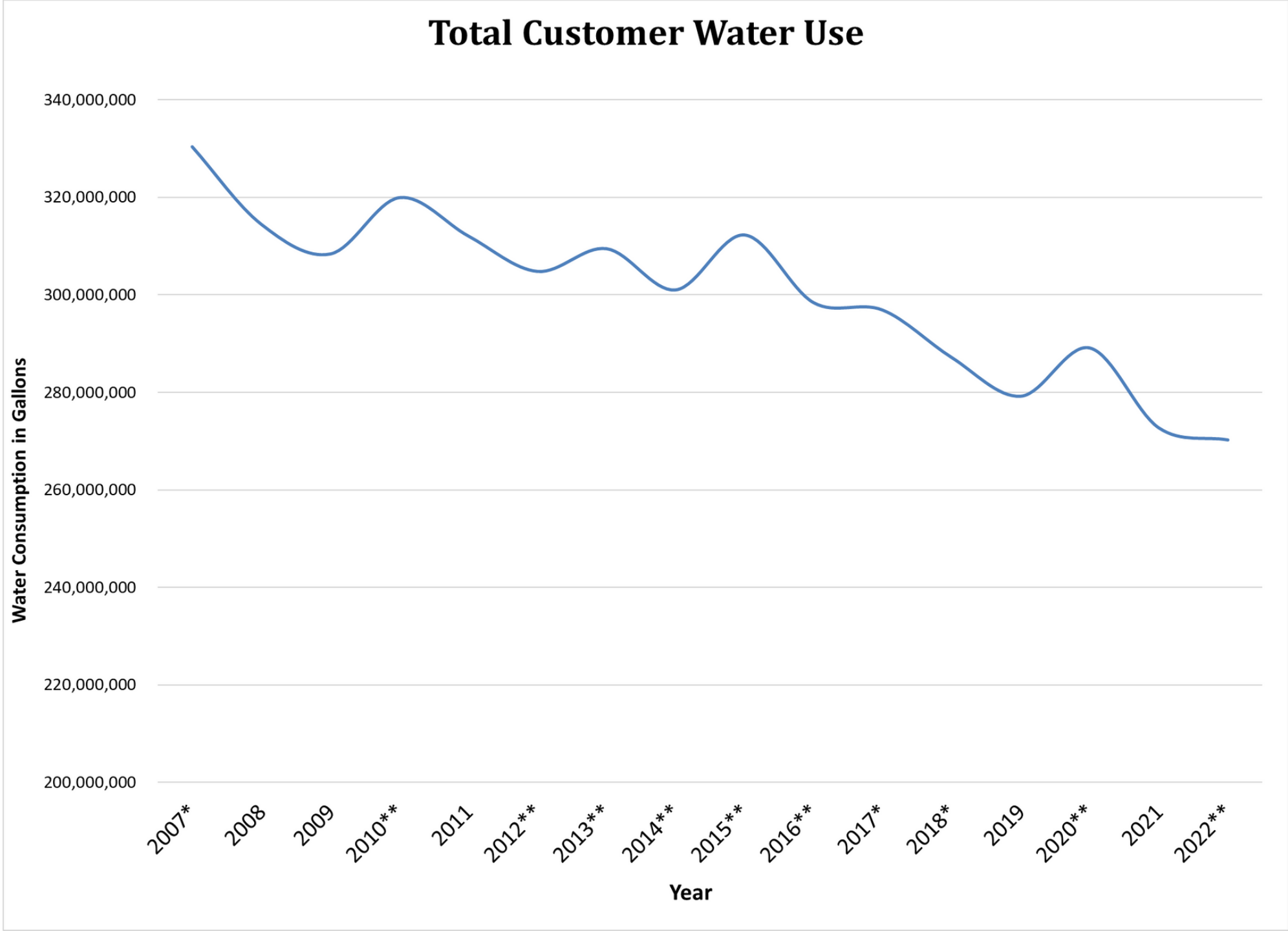
## MEASURE

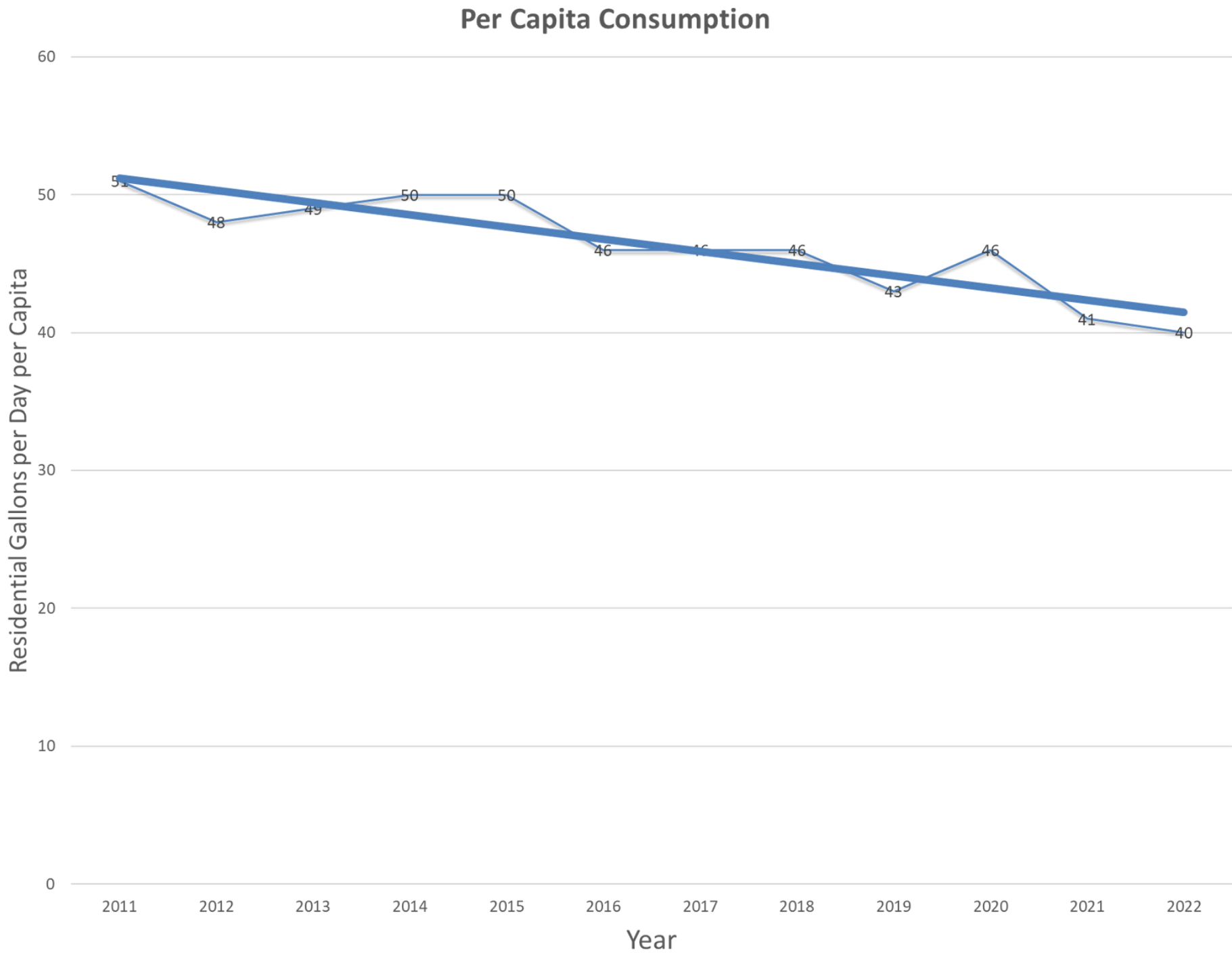
-Efforts to explore unmetered stressors on water supply
-Relationship and trust building with top users
-Exploring the power of smart meters and on demand usage data

*Town of Ipswich*
*Utilities Department*

# Why WUMP?

- Water suppliers in the basin are facing extreme supply challenges due to droughts, growing demand, regulatory changes, and new concerns over contaminants
  - We believe the WUMP has contributed to our water successes. **Even as population has risen, overall residential consumption has gone down- evidence of successful mitigation!**
  - This helps us shift the narrative from scarcity to abundance through efficiency- with the right policies and practices, there is a enough water for everyone to meet their needs.


Total Customer Water Use
340,000,000
320,000,000
300,000,000
280,000,000
260,000,000
240,000,000
220,000,000
200,000,000
Water Consumption in Gallons
2007*
2008
2009
2010**
2011
2012**
2013**
2014**
2015**
2016**
2017*
2018*
2019
2020**
2021
2022**
Year


Per Capita Consumption
60
50
40
30
20
10
0
Residential Gallons per Day per Capita
51
48
49
50
50
46
46
46
43
46
41
40
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
Year

*Town of Ipswich*
*Utilities Department*

# Why WUMP?

- Water suppliers in the basin are facing extreme supply challenges due to droughts, growing demand, regulatory changes, and new concerns over contaminants
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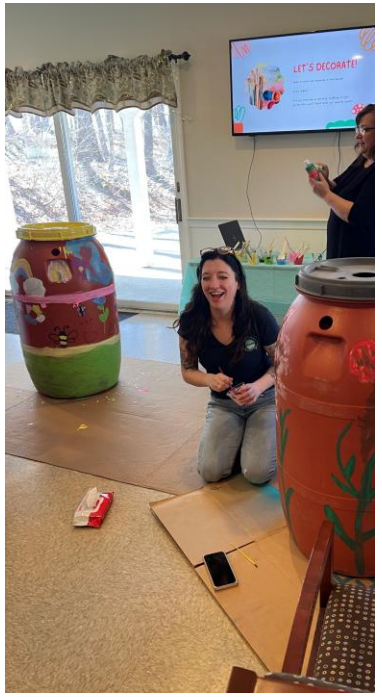
  - This helps us shift the narrative from scarcity to abundance through efficiency- with the right policies and practices, there is a enough water for everyone to meet their needs.

- Our outreach efforts helps build relationships with community members in Town and the region, in addition to promoting sustainability.
  - We are trying to move away from promoting conservation to encouraging **water efficiency**, which we believe is an inclusive, community effort.

*Town of Ipswich*
*Utilities Department*

# Community Engagement at the Core






MASSACHUSETTS
Native Plant Palette

Evidence of behavior change in some cases, but public discourse matters

Who are we isolating?

# Resource scarcity approach

# Abundance through efficiency approach

# Efficiency is for *everyone*

**Abundance through efficiency approach**

# thank you

rbelisle-toler@ipswichutilities

978-412-8616

# City of Santa Fe Water Development Utilizing the Water Bank Process

November 6, 2024

# Role of the Water Bank

- Purpose
  - **To ensure adequate water for increased water use tied to new construction**
    - *Demand side: water conservation results in "demand capacity"*
    - *Supply side: new water rights allows for increased supply*
- Code (Ordinance No. 2016-39 § 7)
  - **"Based on the approved water budget for a development project, the applicant shall obtain water through either the water rights transfer program (Section 25-12 SFCC 1987) or the water conservation credits program (Section 25-11 SFCC 1987) to meet the development water budget according to Specified criteria."**
- Water Bank in Action
  - **To offset their demand, developers can either**
    - *Bring new water rights to the Water Bank to offset their new demand ("above threshold")*
    - *Pay a fee to offset their new demand (subject to limits, "under threshold") in order for the City to purchase more water rights or provide toilet retrofit credits. The water comes from saved water via "Water Conservation Credits", toilet retrofit credits, or allocation of water rights by the governing body.*
  - **Affordable housing uses City-owned water rights.**

# Growth and Water

- Water Offsets

  *The city's continuing efforts in water conservation have become nationally recognized*.[1]
- The city uses a dual-track approach to growth management related to water demand:
  - **Water Conservation at home, work and school through progressively-scaled rate pricing, rebates on replacement of older more water-wasteful household fixtures, and community advertising and community advertising and education.**
  - **Transfer of Water Rights - New residential and commercial development must offset the anticipated water to be used through water conservation credits or transfer enough water rights to serve the entire development at build-out.**

1. City of Santa Fe Land Use Urban Design Study

# Development Water Budg

Developer Brings Proposed Project to Land Use Department

City of Santa Water Staff Determine or Approve a **Development Water Budget**.

| Type of Use | Amount (acre-feet) | Fee | Units |
|---|---|---|---|
| Single Family House (lot <6,000 sq ft) | 0.15 | $2400 | Per Dwelling Unit |
| Single Family House (lot 6,000-10,890 sq ft) | 0.17 | $2720 | Per Dwelling Unit |
| Single Family House (lot 10,890+ sq ft) | 0.25 | $4000 | Per Dwelling Unit |
| Apartment / Condo | 0.16 | $2560 | Per Dwelling Unit |
| Mobile Home | 0.17 | $2720 | Per Dwelling Unit |
| Restaurant, Full Service | 0.02 | $320 | Per Seat |
| Hotel | 0.13 | $2080 | Per Room |
| Retail, Large (>75,000 sq ft) | 0.45 | $7200 | Per 10,000 sq ft |
| Retail, Mid (75,000 – 25,000 sq ft) | 0.43 | $6880 | Per 10,000 sq ft |
| Retail, Small (>25,000 sq ft | 0.06 | $960 | Per Site |
| Laundromat | 0.78 | $12,480 | Per Machine |
| Parks | 1.48 | $23,680 | Per Acre |
| Schools, Middle | 1.68 | $26,880 | Per 100 Students |
| Place of Worship | 0.15 | $2,400 | Per Site |

# Development Water Budget Process

Above Threshold

- Requires State Recognized Water Rights
- Involves NM Office of the State Engineer - *More Onerous + Expensive*
- *Water Resources staff provides administration of Water Rights Transactions*
- *Water Resources staff provides a developer Dedication Certificate once water rights have been fully transferred to one of the City's wellfield (RG-20516)*

| Project Type | Water Budget Threshold |
|---|---|
| Commercial | 5 acre-feet |
| Mixed Use | 7.5 acre-feet |
| Residential | 10 acre-feet |

# Development Water Budget Process

| Project Type | Water Budget Threshold |
|---|---|
| Commercial | 5 acre-feet |
| Mixed Use | 7.5 acre-feet |
| Residential | 10 acre-feet |

Below Threshold

- Able to pay the City to dedicate conserved water
- Administration wholly within the City (no State Agency)
  *Less onerous + Cheaper*
- *Water Division Engineering provides an ACD or AMS for Developers.*
- *All water offsets from the water bank must be paid prior to the approval of a Construction Building Permit and a Water Meter Install Form.*

# Current Growth Paradigm

Development (= increased water demand) in Santa Fe is supported, from a water resources perspective by:

- Conservation
- Purchase of water rights on the Rio Grande
  - Pumping of Buckman Wellfield impacts Rio Grande
  - That impact must be offset by water rights on the Rio Grande
  - Permanent transfer of water from agricultural usage to municipal usage
- Conserved and purchased water tracked in the “Water Bank”

| Supply | Estimated Renewable Supply 1996 - 2020 | Rights |
|---|---|---|
| Santa Fe River | 4375 AF/yr (~3700 w LR) | 5040 AF/yr |
| San Juan Chama | 5289 AF/yr | 5230 AF/yr |
| Santa Fe Wells | 1000 – 2000 AF/yr ??? | 3507 AF/yr |
| Buckman Wells | 2000 – 3000 AF/yr ??? | ~1879 AF/yr |
| Total | 12000 – 15,000 AF/yr?? | ~15,168 |

# END


AGUA ES VIDA


CITY OF
SANTA FE
WATER


save water
SANTA FE


NAVIGATE a life with
LESS WATER
City Joins Efforts to Protect Upper and
Lower Colorado River Basin
savewatersantafe.com

# Resources & Updates

- We started resource lists for water wise landscapes, policies, and affordability
- Survey from Joel Benson of Buena Vista, CO
- Growing Water Smart opportunities

Urban Land Institute

# Growing Water Smart Peer Network Webinar:

## Building & Sustaining Momentum for Water Resilience

## Dec. 12, 12-1:30pm

**Learn from and share examples of sustaining long-term momentum in water resilience work across the Colorado Basin, with speakers including:**

**Joaquin Marruffo**, AZ Department of Environmental Quality and Arizona-Mexico Commission

**Kelly Kopp & Joanna Endter-Wada**, Utah Growing Water Smart & Utah State University

**Chris Cross**, City of Ft. Lupton, Colorado

**Sign Up:**

https://us02web.zoom.us/meeting/register/tZUscOuqrjksG9dKVOBPjFujEPRv52m1TIvv#/registration

# Programming Brainstorm

Let us know what you want for coalition meetings!

| Cohort Programming Agenda | Subject Brainstorm |
|---|---|
| Oct/Nov/Dec 2024 | Water and land use forecasting, data-driven planning that incorporates water, using data to right-size taps and water infrastructure (Babbitt Center) |
| Jan/Feb/March 2025 | Water reuse (Water Reuse Foundation, Pacific Institute) |
| April/May/June 2025 | One Water Approach + land use (US Water Alliance, Denver One Water, Tucson) |
| July/Aug/Sept 2025 | Colorado Water Wise guidebook on best practices (Colorado WaterWise, Brendle Group, Peter Mayer, Victoria, Lindsay) |

# THANK YOU FOR JOINING US!

You can reach me at Marianne.Eppig@uli.org

Urban Land Institute

# Implementation Project Ideas

## Pending funding

- **Convening local roundtables** and/or focus groups between public and private sector land use and water professionals, aimed at supporting water-wise real estate and supportive policies.
- **The creation of educational materials** that advance and document market demand for water-wise land uses.
- **Other ideas?**
  - Tours
  - Case studies with financials
  - Etc.

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