

Fort Collins City Council Work Session Agenda

6:00 p.m., Tuesday, February 25, 2025
300 Laporte Avenue, Fort Collins, CO 80521

NOTICE:

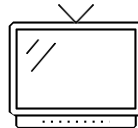
Work Sessions of the City Council are generally held on the 2nd and 4th Tuesdays of each month. Meetings are conducted in a hybrid format, however there is no public participation permitted in a work session.

City Council members may participate in this meeting via electronic means pursuant to their adopted policies and protocol.

How to view this Meeting:



Meetings are open to the public and can be attended in person by anyone.



Meetings are televised live on Channels 14 & 881 on cable television.



Meetings are livestreamed on the City's website, fcgov.com/fctv.

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A solicitud, la Ciudad de Fort Collins proporcionará servicios de acceso a idiomas para personas que no dominan el idioma inglés, o ayudas y servicios auxiliares para personas con discapacidad, para que puedan acceder a los servicios, programas y actividades de la Ciudad. Para asistencia, llame al 970.221.6515 (V/TDD: Marque 711 para Relay Colorado). Por favor proporcione 48 horas de aviso previo cuando sea posible.



While work sessions do not include public comment, mail comments about any item on the agenda to cityleaders@fcgov.com





City Council Work Session Agenda

February 25, 2025 at 6:00 PM

Jeni Arndt, Mayor
Emily Francis, District 6, Mayor Pro Tem
Susan Gutowsky, District 1
Julie Pignataro, District 2
Tricia Canonico, District 3
Melanie Potyondy, District 4
Kelly Ohlson, District 5

Council Information Center (CIC)
300 Laporte Avenue, Fort Collins

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Channel 14 and 881 on Comcast

Carrie Daggett
City Attorney

Kelly DiMartino
City Manager

Delynn Coldiron
City Clerk

CITY COUNCIL WORK SESSION 6:00 PM

A) CALL MEETING TO ORDER

B) ITEMS FOR DISCUSSION

1. Community Report: DOLA Mobile Home Park Oversight Program

The purpose of this item is to provide an update on the Mobile Home Park Oversight Program and also offer perspective on how local jurisdictions could assist in gaps that DOLA is not in a position to address.

2. Mobile Home Park Oversight and Enforcement

The purpose of this item is to provide an overview of current oversight and enforcement mechanisms for mobile home park issues in Fort Collins; highlight enforcement gaps; and seek Council direction on potential strategies to preserve housing affordability; improve livability, habitability, and safety; and promote resident awareness and empowerment. The discussion will include a review of the Colorado Mobile Home Park Oversight Program (MHPOP), which handles state-level enforcement, the City's current role in mobile home park enforcement, and existing gaps and overlap in enforcement.

Staff will outline key challenges faced by MHP residents, including aging infrastructure, resident awareness of and access to resources, and jurisdictional limitations. The session will also explore possible strategies for closing enforcement gaps, including improved coordination with MHPOP, streamlined referral processes, enhanced educational activities, and expanded local oversight mechanisms.

3. 2025 Fort Collins Utilities Water Efficiency Plan Update

The purpose of this item is to provide an overview on progress made on the state-mandated Fort Collins Utilities (Utilities) Water Efficiency Plan (WEP) and to provide foundational information ahead of seeking Council review and approval in summer 2025. Staff will describe information learned from extensive public engagement and will present proposed new water conservation goals and areas of opportunity for conservation strategies including voluntary incentives, education, standards, and policy. This item also provides a summary of engagement tactics and results, and equity evaluation, the conservation strategy prioritization process, as well as background on water use and Utilities broader efforts to manager water supply and demand.

4. Southeast Community Center (SECC)

The purpose of this item is to present four different options for budget and scope for the Southeast Community Center (SECC).

C) ANNOUNCEMENTS

D) ADJOURNMENT

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File Attachments for Item:

1. Community Report: DOLA Mobile Home Park Oversight Program

The purpose of this item is to provide an update on the Mobile Home Park Oversight Program and also offer perspective on how local jurisdictions could assist in gaps that DOLA is not in a position to address.

February 25, 2025

WORK SESSION AGENDA ITEM SUMMARY

City Council



PRESENTER

Christine Postolowski, MHPOP Program Manager
Michelle Gurule, DOLA Community Outreach Liaison

SUBJECT FOR DISCUSSION

Community Report: DOLA Mobile Home Park Oversight Program

EXECUTIVE SUMMARY

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February 25, 2025

WORK SESSION AGENDA

ITEM SUMMARY

City Council



STAFF

JC Ward, Community Engagement Manager, Neighborhood Services

SUBJECT FOR DISCUSSION

Mobile Home Park Oversight and Enforcement

EXECUTIVE SUMMARY

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GENERAL DIRECTION SOUGHT AND SPECIFIC QUESTIONS TO BE ANSWERED

1. Given the increase in complaint resolution at the State level, does Council want to consider local enforcement of issues that are governed by state regulations?
2. What priorities does Council have regarding the City's mobile home park work?
3. Who else should we bring into the conversation to inform this work?

BACKGROUND / DISCUSSION

Mobile home parks ("MHPs") represent an important housing choice in Fort Collins. They are a significant form of private, unsubsidized, "naturally-occurring" affordable housing. The approximate 3,500 mobile homes in the city and Fort Collins' Growth Management Area ("GMA") represent nearly the same inventory as the city's subsidized affordable housing stock of 4,000 units.

Despite their affordability, mobile home parks create systemic challenges for both residents and homeowners. Unlike traditional homeownership, mobile home park residents may own their home, but the land it sits on is owned by the mobile home park. This leaves residents vulnerable to rising lot rents,

evictions and lease terminations, infrastructure neglect, and potential displacement if park owners choose to sell. Lower-income households face restrictive mortgage lending practices due to high down payment requirements and limited financing options.

Mobile home parks are private property, as are their streets, water infrastructure, and most fencing and safety lighting. MHP owners are responsible for maintenance, repair, and assessment of their property's infrastructure, which leads to inconsistency across MHP neighborhoods, raising concerns over habitability and safety when compared to other neighborhood types with City oversight of infrastructure. Additionally, MHP neighborhoods in Fort Collins are home to some of the largest concentrations of historically underserved populations who are less likely to contact the City for assistance or resources, including non-English speakers, lower-income households, and senior citizens.

Within Fort Collins city limits there are 10 mobile home parks and approximately 1,400 home sites. An additional 14 communities and approximately 2,100 home sites exist within the Fort Collins' GMA as illustrated in Attachment 1. Five of these neighborhoods in the GMA are immediately adjacent to City limits and in areas where long-range planning discussions about annexation are currently underway, like the Mulberry Corridor.

Council identified mobile home park preservation and resident protections as priorities in 2019 and provided staff with guidance on programs and initiatives to improve mobile home park livability and viability as a housing option in Fort Collins. Between 2020 and 2023, nine of the mobile home parks in Fort Collins were rezoned to preserve existing mobile home parks under a new zone type.

The cross-departmental MHP Residents' Rights Team supports Council priorities around housing stability and affordable housing meets monthly to implement projects that improve transparency and accessibility of resources, encourage collaboration among City departments working in the mobile home park and affordable housing spaces, provide a support network for residents, and develop or enhance enforcement mechanisms. To help address financial barriers, the City offers mini-grants, emergency assistance, and upcoming mobile home improvement grants (2025-2026). Policy and Code enforcement efforts focus on strengthening habitability protections through maintenance responsibility Code updates, Municipal Code enforcement, and increased billing transparency for utilities. Additionally, the City continues to assess and recommend policy improvements at both the local and state levels to ensure long-term protections for mobile home park residents.

Current City of Fort Collins Mobile Home Park Activities

Due to the wide range of issues experienced in mobile home parks, unique demographic and socioeconomic status of residents, and breadth of housing affordability work, City departments in six Service Areas carry out work in mobile home parks. At least 29 separate City teams have ongoing projects within mobile home parks. The major challenges to this decentralized work include the lack of a singular point of contact for residents, unstructured and inconsistent reporting across departments, related budget offers developed in a vacuum instead of packaged together, and non-existent overarching strategic plan for local MHP work.

The activities in the table below include completed and ongoing projects in three outcome areas: improving living conditions, promoting resident empowerment, and preserving mobile home parks as an essential part of the affordable housing landscape in Fort Collins. Involvement of external partners are indicated where the City provides staffing or funding support for those activities. (See Attachment 2 for completed and ongoing project descriptions.)

Table 1: MHP Activities, Status, and Associated City Department Involvement

Status	Activity	City Departments Involved
Completed – Promote Resident Awareness & Empowerment	MHP Webpage	Communications & Public Involvement Office (“CPIO”) Neighborhood Services
	MHP Mini-Grants	Environmental Services Department Fort Collins Utilities – Water Conservation Healthy Homes Neighborhood Services
	Local Complaint System (Access Fort Collins)	Neighborhood Services CPIO
	MHP Handbook	Neighborhood Services
In Progress/Ongoing – Promote Resident Awareness & Empowerment	Neighborhood Liaisons & Community Consultants (highest need parks)	Neighborhood Services
	Education & Outreach	Conflict Transformation Works Cultural Services Economic Health Office Environmental Services Department Equity Office FC Moves Fort Collins Utilities Healthy Homes Natural Areas Neighborhood Services Park Planning Parks Department Planning & Development Review Police Services Transfort Urban Renewal Authority
	Resident Association & Organizing Assistance	Equity Office Neighborhood Services
	Targeted Community Mediation & Community Mediators/Promotoras Program	Conflict Transformation Works External - Community Partners

Status	Activity	City Departments Involved
	Community Conversations Focus Group	Equity Office
	Grocery Rebate Program	Social Sustainability Department
Completed – Improve Livability, Habitability, & Safety	Section 18 Residents' Rights Updates	City Attorney's Office Code Compliance Neighborhood Services
	Limitation of Required Upgrades	Neighborhood Services
	Local Nuisance Code Proactive Enforcement Rollout	Code Compliance Neighborhood Services
In Progress/Ongoing – Improve Livability, Habitability, & Safety	Enforcement of Municipal Code (Section 18)	Code Compliance Forestry** Neighborhood Services
	Complaint-Based Inspections & Enforcement	Building Services Rental Housing Zoning Services
	Local & State Policy Analysis & Recommendations	City Manager's Office Neighborhood Services Social Sustainability Department
	Broadband Infrastructure & Income-Qualified Service	Fort Collins Connexion
	Transportation Access Planning & Projects	FC Moves
Completed – Preserve Housing Affordability	Utility/Water Services Billing Transparency Code & Process Changes	City Attorney's Office Fort Collins Utilities Neighborhood Services
	Maintenance Responsibilities Code Changes	City Attorney's Office Neighborhood Services

Status	Activity	City Departments Involved
In Progress/Ongoing – Preserve Housing Affordability	Larimer Home Improvement Program & Emergency Grants	External - Loveland Housing Authority
	Partner/Contractor Projects - CARE; LCCC	Fort Collins Utilities External - Larimer County External - Energy Outreach Colorado
	MHP Home Improvement Grants (limited to building envelope work for 2025-2026)	Environmental Services Department Healthy Homes Neighborhood Services
	Eviction Legal Fund Trainings & MHP Resident/Landlord Support	External - Community Partners Neighborhood Services

** Enforcement Limited to trees adjacent to public streets.

Current Colorado Mobile Home Park Oversight Program Activities Supporting Fort Collins

The Mobile Home Park Oversight Program (“MHPOP”) began operating in May 2020, allowing mobile homeowners, property managers, and owners to file complaints with the department rather than using the judicial system to resolve issues and to register MHPs. Over time, MHPOP expanded its complaint system to allow submissions from renters, local governments, and nonprofit organizations, though anonymous complaints are still not accepted. Additionally, MHPOP requires mobile home park owners to register annually and maintains a statewide database of registered parks.

MHPOP’s investigatory tools and enforcement mechanisms are outlined in the MHP Oversight Act and Administrative Rules. MHPOP has subpoena power for records related to their investigations, ability to levy monetary penalties for violations of the Act, power to issue cease and desist orders, and authority to determine legal enforceability of lease terms and park rules. MHPOP also has a collaborative agreement with the Colorado Attorney General’s Office for interpretation of lease agreement terms, enforceability of park rules, and assistance with enforcement of the Act. The program has received a total of 318 complaints from Fort Collins residents since 2020 and has issued seven Notices of Violation and 29 Notices of Non-Violation. Notices of Violation and Non-Violation are issued by MHPOP upon determination of whether a law was violated and by which party. Notices of Violation also include the steps necessary to correct a violation, sets deadlines to cure, and outlines penalties for failure to comply. 11 Fort Collins cases remain open and under investigation. All other cases were closed due to lack of jurisdiction or inability to reach the complainant, MHPOP declining to investigate, consolidation with other complaints, or resolution by the parties.

Fort Collins mobile home park resident complaints to MHPOP from 2020 through 2024 are summarized in the figures below.

Figure 1: Number of Fort Collins MHPOP Complaints and Enforcement Outcomes by Category 2020-2024

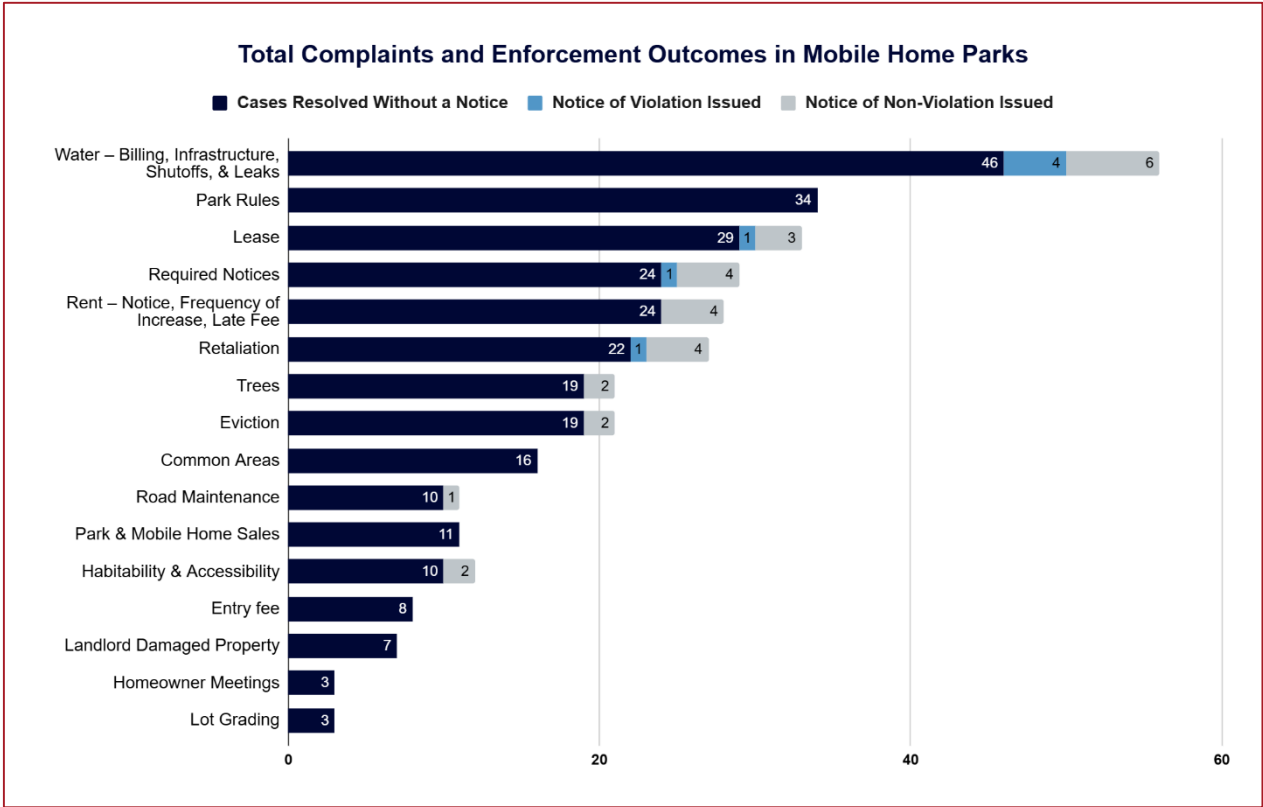
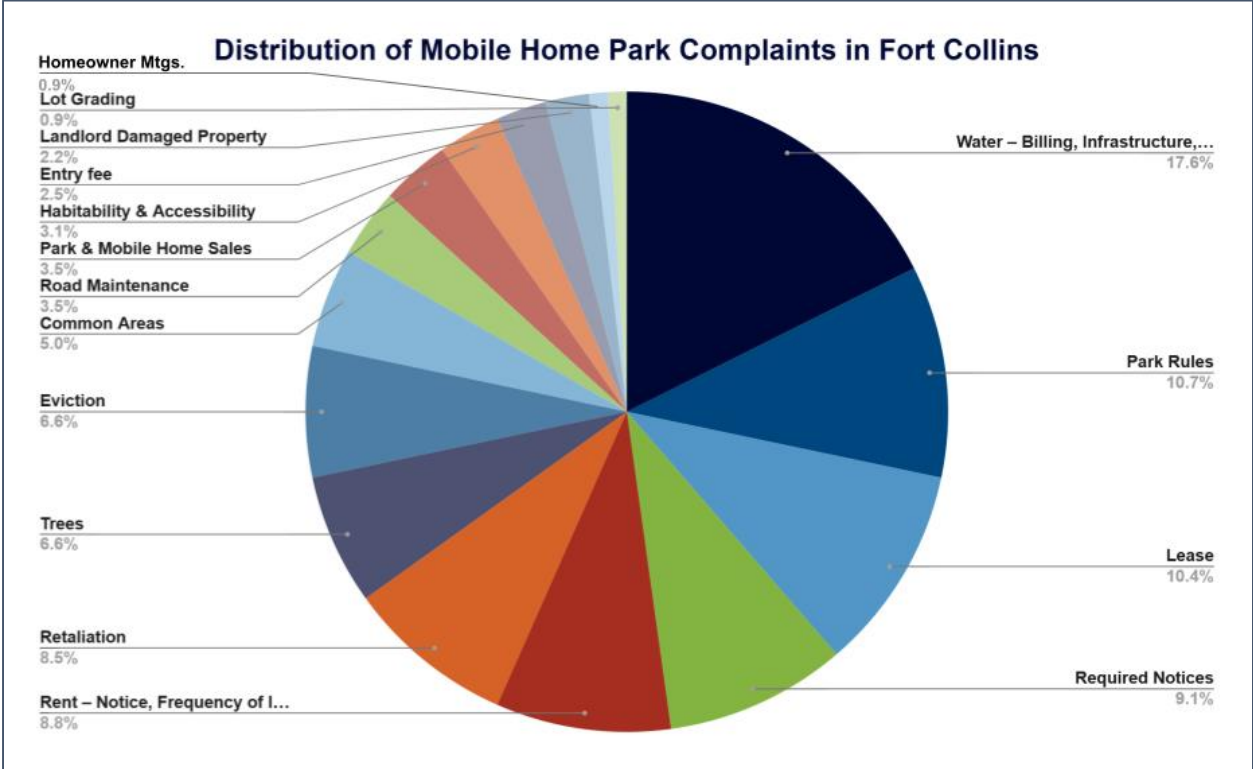


Figure 2: Distribution of Fort Collins MHPOP Complaints by Category 2020-2024




















Discussion – Overlap and Gaps in Enforcement





Overlap exists between City of Fort Collins and MHPOP enforcement of some issues. **Table 2** below lists the categories of complaints and enforcement responsibilities for mobile home parks in Fort Collins. These categories derive from both MHPOP data, Fort Collins Access cases, and public engagement input.

For mobile home park issues that require legal advice, opinions, or analysis, Neighborhood Services staff refers residents to free attorney advice clinics or legal services through the Eviction Legal Fund and MHPOP, as staff does not give legal advice to the public.

Table 2: Mobile Home Park Enforcement

Issue	No City Staff Enforcement – Refer to MHPOP & Eviction Legal Fund	City Department Enforcement	No MHPOP or City Staff Enforcement
Water – Shutoffs	✓	✓ Fort Collins Utilities assists if shutoff is due to City water line issues	
Water – Billing; Leaks	✓	✓ Neighborhood Services has billing audit access	
Water & Sewer Line - Maintenance & Inspection			✓
Park Rules*	✓		
Accessory Structures		✓ Neighborhood Services	
Fences			✓
Lease*	✓		
Required Notices	✓		
No Emergency Contact Information Posted	✓	✓ Neighborhood Services	
Rent - Notice, Frequency of Increase, Late Fee*	✓		
Retaliation*	✓		
Trees	✓	✓	

Issue	No City Staff Enforcement – Refer to MHPOP & Eviction Legal Fund	City Department Enforcement	No MHPOP or City Staff Enforcement
		Neighborhood Services	
Eviction*			
Common areas		 Code Compliance	
Road maintenance			
Park & Mobile Home Sales			
Habitability		 Rental Housing	
Entry fee			
Landlord Damaged the Property*			
Homeowner Meetings		 Neighborhood Services	
Lot grading		 Building Services	
Speed Limits			
Security Lighting			
Availability of Management			
Language Access & Barriers	 <i>New in 2024</i>		
Frequent Changes in Management			
Inadequate Communication Channels			
Homeowner’s & Renter’s Insurance Requirements			

Issue	No City Staff Enforcement – Refer to MHPOP & Eviction Legal Fund	City Department Enforcement	No MHPOP or City Staff Enforcement
Parking & Towing			
Neighbor-to-Neighbor Disputes		 Neighborhood Services	
Animal Control		 NOCO Humane	
Water - Quality		 Fort Collins Utilities & CDPHE	

* Resolution requires substantial legal analysis or opinion for determination of a violation or non-violation.

Enforcement Gaps

Staff from the Mobile Home Park Oversight Program, Department of Local Affairs, and City of Fort Collins met twice since Q3 2024 to discuss partnership opportunities, challenges, progress, and the future of the program. MHPOP has jurisdiction over several categories of complaints but not the on-the-ground specialists or funding for these specialists crucial to investigation. For example, MHPOP does not have access to arborists to assess dangerous trees or stormwater experts for to evaluate drainage or lot grading concerns. New state legislation effective in June 2025 will require MHP owners to clear walkways and streets of snow, but without dedicated inspectors, MHPOP must rely on complaints, videos, and photographs for enforcement.

Despite the establishment of MHPOP, significant challenges persist in mobile home parks, particularly regarding infrastructure maintenance. Many parks struggle with aging water and sewer lines, road maintenance, and inconsistent park rule enforcement for safety, which require technical experts to assess for possible enforcement actions. Because these parks are privately owned, the responsibility for maintaining infrastructure falls on property owners. Water quality issues in mobile home parks involve multiple entities, including local water providers, MHP managers, MHPOP, the Colorado Department of Public Health and Environment (CDPHE), and certified water operators. A new grant program through CDPHE assists with testing and mitigation efforts statewide, but the lack of centralized coordination remains a barrier.

Not all mobile home parks face the same challenges, and many concerns remain underreported to MHPOP or the City due to fear of retaliation, limited access to the complaint process, or lack of awareness of enforcement mechanisms. Frequent turnover in property managers further exacerbates these challenges, leading to inconsistent communication, disruptions in voluntary compliance efforts, and difficulties in resolving complaints. Poor communication and lack of transparency in park management often leave residents uncertain about their rights and responsibilities. Additionally, language barriers further hinder non-English-speaking residents from accessing available resources.

Due to the complexity of the processes both within the City and among various regulatory and enforcement bodies, MHP residents are often unclear about where to report or request assistance for issues and may receive inconsistent direction.

While some of these concerns overlap with MHPOP's jurisdiction, many remain unaddressed due to limited enforcement capabilities at both the state and local levels. Addressing these ongoing challenges will require stronger coordination between agencies, increased funding for investigative resources, and improved mechanisms for ensuring compliance within mobile home parks.

NEXT STEPS

Next steps to achieve outcomes that enhance conditions in local mobile home parks and strengthen connections focus on staff research and evaluation. Potential solutions for exploration by outcome area are discussed below and outlined in Attachment 3.

Suggestions for additional Staff evaluation are divided by the potential cost of implementation: those that are low-cost or could be achieved through tradeoffs for existing resources and those likely to require additional resources.

Options for next steps:

1. Activities that are low-cost or could be tradeoffs for existing resources:
 - Technical assistance, education, or other tools to assist with infrastructure issues. *(Not including repair or replacement of infrastructure.)*
 - Evaluate options for City Staff or contractors to assess park conditions and recommend preventative maintenance schedules, repairs, and community plans for road safety, dangerous trees, parking, streetlights, and snow removal.
 - Enhance coordination and strategic planning of MHP work in Fort Collins to better address existing concerns, emerging issues, and available resources.
 - Expand of existing trainings and educational opportunities to specifically apply to mobile home parks.
 - Strengthen external language access requirements and enforcement for MHPs under the new State law.
 - Update Municipal Code to mandate participation in MHP manager certification and training
 - Update Municipal Code to allow fences in MHPs
2. Staff evaluation of these activities that would likely require future allocation of resources to implement:
 - Ways to coordinate with MHPOP on specific complaint types that align with City Staff expertise. Explore options for payment or service models to fill gaps in investigations.
 - Cost analysis to increase local capacity for mediation and community-based promotoras for earlier, efficient resolution of conflict between parties.
 - Partnerships and negotiated investment opportunities with property owners to provide or assist in making infrastructure assessments and recommendations.
 - Dedicated work group for mobile home park coordination and strategic planning for internal and external stakeholders.
 - Require annual submission of tree maintenance plans, emergency contact information and office hours, water pressure compliance reports, parking and towing policies; establish timelines to address concerns and set penalties

- Establish water rebilling methodology and disclosures for MHPs that charge for rent with “water included” or work with MHPOP to close the loophole
 - Establish enforceable timeline for water infrastructure leak repairs and penalties for non-compliance
 - Authorize the City to provide emergency water services and portable toilet access for service disruptions longer than 12 hours and charge the MHP for these services
 - Establish the right of entry for educational assessments (upon resident request) of infrastructure such as road and traffic safety, street lighting, and tree maintenance
 - Adopt State requirements and local enforcement for MHP notices like notice of landlord entry onto the lot, intent to sell the MHP, changes to park rules, and homeowner rights
3. Continued monitoring of MHPOP complaints and resolution following 2024 program improvements to guide future local work.
 4. Regular reports to Council on local MHP activities and issues.

ATTACHMENTS

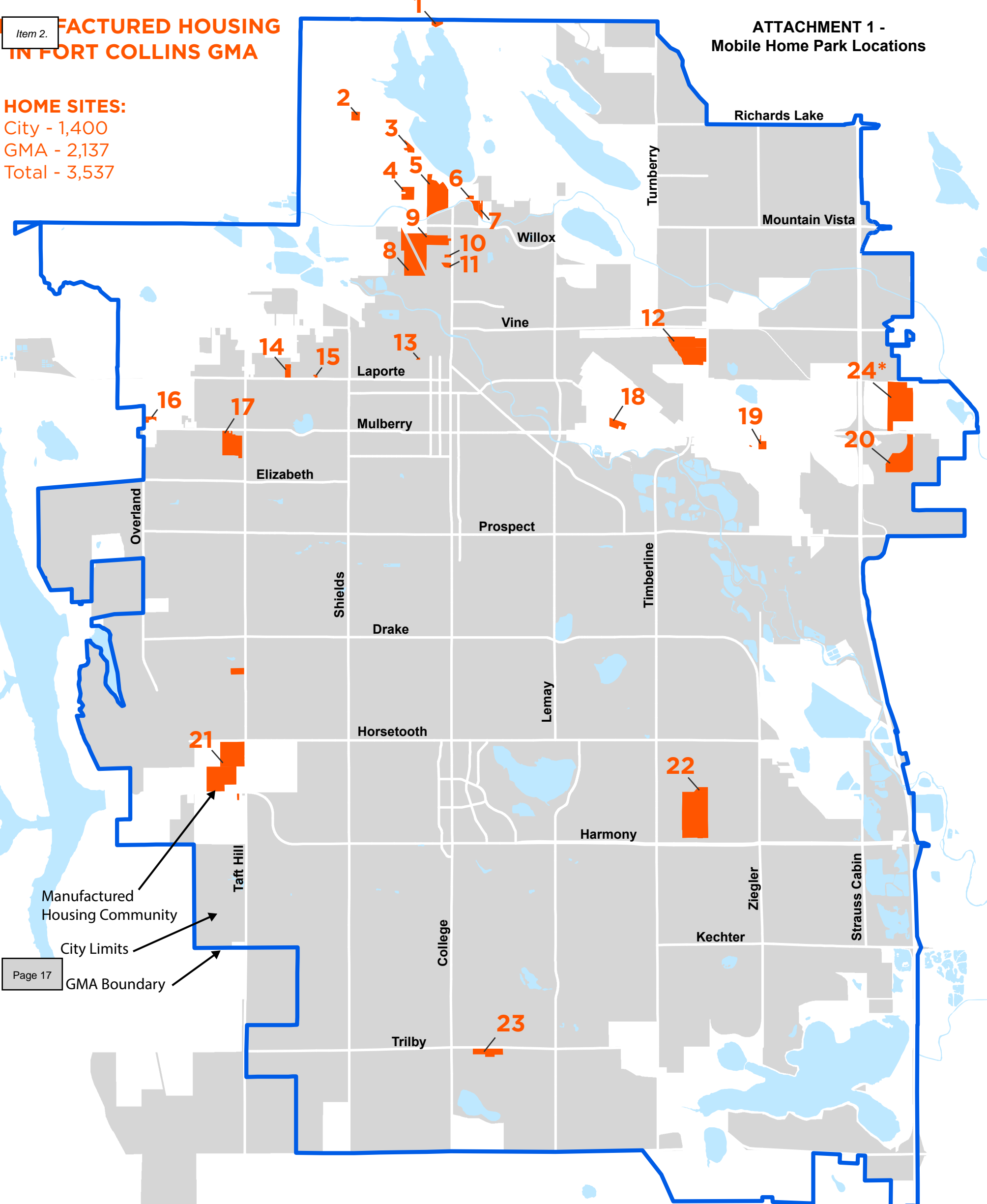
1. Locations Map (Fort Collins & Growth Management Area)
2. Residents’ Rights Team Completed & Ongoing Projects 2019-2025
3. Potential Solutions for Exploration by Issue
4. Presentation

**MANUFACTURED HOUSING
IN FORT COLLINS GMA**

**ATTACHMENT 1 -
Mobile Home Park Locations**

HOME SITES:

City - 1,400
GMA - 2,137
Total - 3,537



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MANUFACTURED HOUSING COMMUNITIES:

MAP KEY	PARK NAME	HOME SITES	CITY / GMA
1	Terry Cove	24	GMA
2	Blue Spruce	28	GMA
3	Terry Lake	29	GMA
4	Equestrian Center	4	GMA
5	Poudre Valley	349	GMA
6	Spaulding Lane	8	GMA
7	Highland Manor	66	GMA
8	Hickory Village	204	City
9	North College (Plaza)	320	City
10	Montclair	9	City
11	Stonecrest	24	City
12	Collins Aire	329	GMA

MAP KEY	PARK NAME	HOME SITES	CITY / GMA
13	Meldrum / Cherry	5	City
14	North Star	54	City
15	Cottonwood	12	City
16	Aspen	32	GMA
17	Skyline	172	City
18	Nueva Vida	65	GMA
19	Pine Valley	37	GMA
20	Sunflower	190	GMA
21	Timberidge	585	GMA
22	Harmony Village	486	City
23	Pleasant Grove	114	City
24	Cloverleaf	391	GMA

Attachment 2 – Mobile Home Park Residents’ Rights Team Completed & Ongoing Projects 2019-2025

Completed Projects

- **Mobile Home Park Webpage**
<https://www.fcgov.com/neighborhoodservices/mobile-home-park-communities> provides up-to-date information about mobile home parks in Fort Collins, eviction avoidance programs, and links to the State MHP Dispute Resolution Program and local Access Fort Collins complaint/communication system.
- **Mobile Home Park Mini-Grants**
 \$50,000 allocated by City Council in 2019 as a mid-cycle budget appropriation for mini-grants awards of up to \$5,000 per project to neighbors, property managers, and/or property owners through an application-based approach with selection criteria developed collaboratively by mobile home park residents, City staff, property managers, and mobile home park owners. Funded projects included replacement of windows and doors, tree trimming and removal, water quality testing, and testing of water utility submeters. Additional projects for home and community improvement were offered through federal American Rescue Plan Act funding (up to \$7,000) in 2023-2024 and 2050 Climate Tax dollars in 2024. 2050 Climate Tax funds for MHP mini-grants have been awarded for 2025 and 2026.
- **Municipal Code Changes**
 Municipal Code changes have expanded protections for participation in community meetings, limited required upgrades to homes, clarified responsibility for tree maintenance and costs, required participation in leak notification systems, protected window-unit air conditioners and clotheslines, allowed increased auditing functions of rebilling for water, and added transparency and language equity requirements to property management and emergency contact postings.
- **Local Complaint System**
 State MHP Dispute Resolution complaints do not allow anonymous submissions, which led to fear of retaliation from property managers or owners. The existing Access Fort Collins system for questions, comments, and service requests allow anonymous complaints and requests from all residents. A special section for Mobile Home Parks was added to the “Neighborhoods” topic area with submissions routed directly to the MHP Residents’ Rights Team for review, investigation, and customer service by a Neighborhood Liaison.
- **Mobile Home Park Handbook**
 This handbook was completed in 2024, is available on the website at: <https://www.fcgov.com/neighborhoodservices/mobile-home-park-communities> in Spanish and English, and is distributed to residents, managers, and owners. The handbook provides information on MHP laws, maintenance, utilities, community and city resources, and the enforcement program. Development of this handbook has been occurring since 2020 but has been delayed due to changes in legislation, utilities processes, and the development of this enforcement program. Additionally, due to the increased level of collaboration across city departments to address MHP issues, certain matters have come under the scope of different work areas. For example, lot grading complaints were previously directed to Stormwater. They are also under the purview of Building Inspection, which has different processes and enforcement capabilities. As this collective work evolves, we continue to update the plans for the handbook.

- **Utility Billing Transparency & Leak Notifications**

Through extensive outreach with residents, community partners and the City have received reports of high water bills that vary widely for a unit; retaliation through water rebilling by property owners; inconsistent calculations of monthly water utility charges; inconsistent fee structure between housing units; and failure to disclose the MHP's monthly water bill, amount paid, or formula/rates used to calculate each unit's share of the water cost required under state law. Municipal Code changes now Neighborhood Services to audit water rebilling from water utility bills, park water bills, and rebilled amount from residents as well as require all MHPs to register for continuous consumption/leak notification monitoring programs available through water providers.

- **Local Nuisance Code Proactive Enforcement Rollout**

Code Compliance staff added proactive inspections to all MHPs in city limits, continue to conduct complaint-based enforcement, and collaborate with Programs staff for voluntary compliance resources and education. Neighborhood clean-up and repair days focus on removing outdoor rubbish & household hazardous waste, repairing dilapidated fences, removing weeds & overgrown vegetation, and performing minor exterior repairs; proactively eliminating potential code violations. These programs began in 2021 and are offered twice per year as funding allows, prioritizing MHPs with the highest number and proportion of Code violations. Outreach efforts also include relationship-building with property managers, community resource fairs, and participation in Homeowner/Renter DIY workshops for home repair in mobile home parks.

Projects Currently Underway &/or Ongoing

- **Neighborhood Liaisons & Community Consultants for highest need MHP's**

Neighborhood Liaison and Community Consultant positions are designed to build a bridge between community needs and City/community resources, with an emphasis on equity to enhance the capacity of residents to participate in public engagement activities, decision-making at all City levels, and self-determination through community organizing. North College MHP and Skyline MHP are the only 55+ MHP communities in Fort Collins and a neighborhood liaison is assigned to each. The Mi Voz community group supported through La Familia-The Family Center programming also has access to City resources and programs for residents of MHP's in the North College corridor, Hickory Village MHP, Poudre Valley MHP, and Parklane MHP.

Staff is currently building capacity for community organizing and neighborhood action planning to shift from a convenor role to a support and sustain role for resident associations to allow assignment of Neighborhood Liaisons and Community Consultants to additional mobile home parks. Community Consultants have assisted with a number of programs including work with Fort Collins Utilities for Colorado Affordable Residential Energy projects, outreach events, and grant administration.

- **Larimer County Home Improvement Program ("LHIP") & Emergency Grants**

Low to no interest rate loans with flexible terms are available through LHIP to meet a homeowner's budget to repair or improve their home for low- to moderate-income Larimer County homeowners. The program includes mobile/manufactured home repairs. Emergency fund grants up to \$3,000 for individuals 50% or below the area median income for emergencies such as no hot water, burst pipes, gas leaks.

- **Colorado's Affordable Residential Energy Program ("CARE") & Larimer County Conservation Corps ("LCCC")**

CARE Program provides energy audits, education, and upgrades including low-flow fixtures, Energy Star refrigerators, air sealing, insulation, and HVAC upgrades. Through

Attachment 2 – Mobile Home Park Residents' Rights Team Completed & Ongoing Projects (2019-2025)

the work of Neighborhood Services Community Consultants in mobile home parks, applications for the CARE program went from 12 to 99 in one year.

LCCC conducts basic inspection of homes, appliances, windows, toilets, and heating/cooling system and installs appropriate efficiency measures based on your home's needs, such as LED light bulbs, water conserving shower-heads and aerators, smoke/carbon monoxide detectors, clotheslines and high-efficiency toilets.

- **Education & Outreach**

The City of Fort Collins Neighborhood Services Department conducts regular outreach and education with MHP residents. This work often brings in representatives from other City departments and community partners to further deepen connections with residents and raise awareness of City and partner services that residents may not be aware of. Some examples of these programs include:

- Neighborhood Meetings: City staff works with the community to set up meetings to discuss concerns, issues, or opportunities for MHP residents. These meetings provide important information to neighbors, and allow them to ask further questions of staff and provide feedback.
- DIY Workshops: Residents learn valuable DIY skills in a fun and safe environment, and then take those new skills home to perform routine home maintenance themselves. DIY workshops have covered a variety of topics, such as helping residents familiarize themselves with common power tools and their uses, or showing residents how to fix common plumbing issues with hands-on demos from local experts.
- Resource Fairs: Residents are invited to connect with other city departments and community partners in a fun event that attracts the whole family. The most recent fair in Harmony Village MHP hosted 16 booths, which included a mix of representatives from City departments and community organizations. In addition to resource & information booths, there are typically catered meals for residents and entertainment such as a petting zoo, face painting, and a photo booth.

- **MHP Home Improvement Grants (limited to building envelope work for 2025-2026)**

In 2023-2024, Neighborhood Services completed 37 mobile home improvement projects, significantly enhancing residents' quality of life. Over \$200,000 in ARPA funds, Innovate Fort Collins Challenge funding, and Climate 2050 Tax went directly to these projects to improve individual mobile homes. Projects included electrical upgrades, flooring repair, skirting replacement, roof replacement, and others. Most of the roofing projects were required for the resident to obtain homeowners' or renters' insurance, a condition of their leases to remain in the mobile home park. 2025-2026 MHP home improvement grants will focus on building envelope issues such as air sealing, windows, insulation, skirting and door replacement, roofing work, and subfloor repairs.

- **Local & State Policy Work**

Through collaborative work with community partners, residents, mobile home park managers and owners, and regional stakeholders, the MHP Residents' Rights Team has provided information on MHP issues and concerns to the Department of Local Affairs MHPOP program and elected state-level representatives to help assess strategies and legislative changes. Public engagement activities also led to collaborative development of Municipal Code changes to support residents' rights and neighborhood livability.

- **Resident Association & Organizing Assistance**

Modeled after existing Neighborhood Services leadership development programs, City staff supports development and ongoing community organizing of Residents' Associations (RA's) in MHPs including Skyline MHP, North College MHP, Harmony Village, and Hickory Village. Once established, RA's have support but not guidance or input from the City and are entirely run by residents. RA's improve outcomes for residents and managers by streamlining and strengthening communication, organizing projects and initiatives, and enhancing the sense of community within a park. These groups may also be precursors to resident-owned community co-op formation and financing in the event their MHP is for sale.

- **Targeted Community Mediation & Community Mediators/Promotoras Program**

The City of Fort Collins Community Mediation program is a free and confidential mediation program to help Fort Collins residents work through their conflict in a productive way that offers an alternative to hiring lawyers, going to court, calling enforcement agencies, and escalating the conflict. Mediation is led by professionally-trained mediators who are there to help all parties communicate their needs and work towards a healthy compromise.

The Eviction Legal Fund also works with community partners to train community members as volunteers (promotoras) who want to provide mediation services in their own neighborhoods. This effort is made in response to an identified need to address housing instability. Mediation can be a valuable alternative to legal action in eviction proceedings, where landlords have legal representation 90% of the time while tenants only have that same support 10% of the time.

- **Eviction Legal Fund 'Know Your Rights' Trainings & MHP Resident/Landlord Support**

The City of Fort Collins offers free legal assistance, advice, and training through partner organizations. Specifically designed 'Know Your Rights' trainings for MHP residents, managers, and owners are offered multiple times throughout the year. Qualified legal professionals also offer legal clinics and direct representation for anyone facing housing-related issues. Colorado Poverty Law Project, one of the Eviction Legal Fund partners, has a dedicated MHP specialist unit and attorneys that work with Fort Collins MHP residents and attend outreach events. Housing packets and a housing hotline are accessible in Spanish and English through other partners. Quarterly housing resource events are hosted by Eviction Legal Fund partners and advertised through Community Consultants and Promotoras in MHPs.

Attachment 3 – Potential Solutions for Exploration by Issue

Based on conversations across multiple potentially impacted departments and a needs assessment to address Mobile Home Park enforcement challenges and gaps, potential next steps include exploration the following solutions identified by City staff and MHPOP. Actions to address issues outlined in this table would require additional resources such as staffing and funding.

Outcome Area	Identified MHP Issue	Potential Solutions for Exploration
Preserve Housing Affordability	Lease Agreements; Retaliation; Park Rule Enforceability	Assess viability of City staff, Administrative Hearing Officers, or legal consultants reviewing evidence and determining whether there has been a violation of State or local laws related to retaliation, lease agreement contents and enforcement, enforceability of park rules, termination of lease agreements, and compliance of various legally-required notices.
	Maintenance of Water/Sewer Lines	Develop a process to conduct water and wastewater infrastructure assessments and authorize the City or contractors to repair leaks or perform maintenance and bill MHP owners.
	Notice of Water Leaks & Leak Charges	Collaborate with parks to install leak detection systems, purchase commercial underground leak detection equipment, or contract professionals to detect leaks; purchase leak detection equipment MHP owners can borrow or rent from the City.
Improve Livability, Habitability, & Safety	Trees	Contract with a licensed arborist to identify and mitigate hazardous trees and trees in need of maintenance, analyze additional resourcing needed based on assessments, and coordinate with the City's Forestry team to assure alignment.
	Road Maintenance	Development of an inspection/assessment system; provide recommendations on road maintenance standards and repairs needed to MHP managers.
	Water – No Access during Shutoffs	Coordination of emergency response to water outages; ability to invoice property manager/owner for the City to contract or provide potable water and portable toilets in response to water outage complaints.
	Fences	Amend Municipal Code to protect the right to install and maintain fences around lots in mobile home parks.

	Parking	Require MHPs to submit parking and towing policies to the City for review; conduct parking assessments and provide policy recommendations for MHPs upon request by residents (no more than one time per MHP).
	Speeding & Traffic	Provide educational traffic assessments of private MHP streets, recommendations to park managers, and access to traffic calming or control equipment upon request.
	Streetlights & Safety Features	Assess and map responsibility/ownership for security lighting, perimeter fencing, and safety features of MHPs.
	Snow Removal	Assess options and partnership models for Code Compliance to investigate MHPOP snow removal complaints under the new Colorado law taking effect in June 2025.
	General – MHP Licensing	Develop a MHP local licensing program.
Promote Resident Awareness & Empowerment	Language Access	Create a language access policy for all communications and documents between MHP managers and residents; enhance enforcement of state language equity policies for MHPs.
	General - Mediation	Local policy change to recommend mediation prior to filing complaints with MHPOP.

Mobile Home Park Oversight and Enforcement

JC Ward

Community Engagement Manager –
Neighborhood Services



- 1) Given the increase in complaint resolution at the State level, does Council want to consider local enforcement of issues that are governed by state regulations?
- 2) What priorities does Council have regarding the City's mobile home park work?
- 3) Who else should we bring into the conversation to inform this work?

Background

- Mobile Home Parks in Fort Collins
- City Mobile Home Park Activity Highlights
- Colorado Mobile Home Park Oversight Program

Current Oversight & Enforcement

Enforcement Gaps

Next Steps

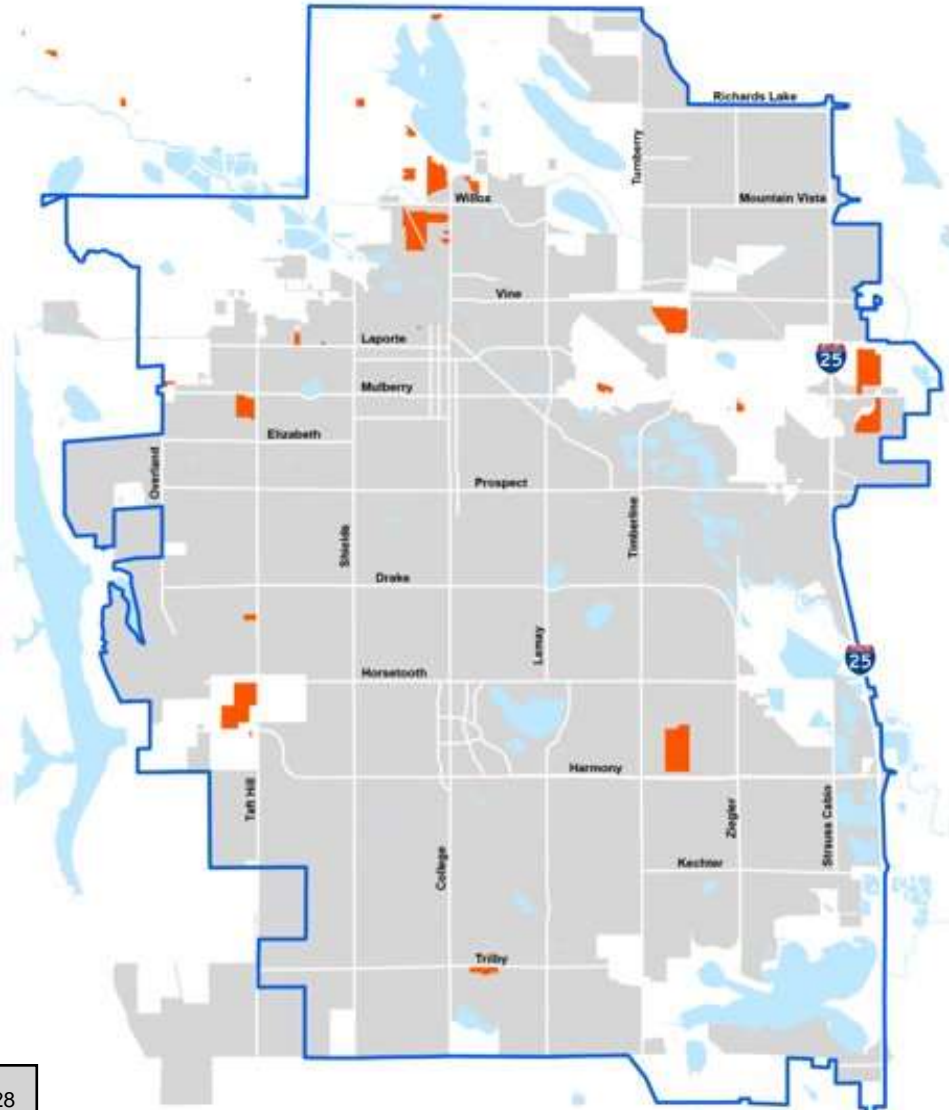
Direction Sought



Mobile home parks are private, unsubsidized, “naturally-occurring” affordable housing.

- **Residents may own** their home, but the **land** it sits on is owned by the mobile home park.
- Mobile home parks are **private property**, as are their streets, water infrastructure, and most fencing and safety lighting.
- MHP neighborhoods in Fort Collins are home to some of the **largest concentrations of historically underserved populations** including non-English speakers, lower-income households, and senior citizens.





	City	GMA	Total
Communities	10	14	24
Home Sites	1,400	2,137	3,537

- City Limits
- Manufactured Home Community
- GMA Boundary

Mobile Home Park Residents’ Rights Work Team



Established 2019



Cross-departmental



Policy and Code enforcement efforts



Encourage collaboration among City departments



MHP mini-grants and mobile home improvement grants



Improves transparency and accessibility of resources



9 MHPs in Fort Collins rezoned for MHP preservation



Community Services			Police Services
Project	Education & Outreach	Enforcement of Municipal Code (Section 18)	Education & Outreach
Contributing Team	<ul style="list-style-type: none"> • Cultural Services • Natural Areas • Park Planning • Parks Department 	<ul style="list-style-type: none"> • Forestry** 	<ul style="list-style-type: none"> • Police Services

Information & Employee Services					
Project	MHP Webpage	Local Complaint System (Access Fort Collins)	Education & Outreach	Resident Association & Organizing Assistance	Community Conversations Focus Group
Contributing Team	<ul style="list-style-type: none"> • CPIO 	<ul style="list-style-type: none"> • CPIO 	<ul style="list-style-type: none"> • Equity Office 	<ul style="list-style-type: none"> • Equity Office 	<ul style="list-style-type: none"> • Equity Office

Fort Collins Utilities					
Project	Education & Outreach	Partner/Contractor Projects – CARE; LCCC	Broadband Infrastructure & Income-Qualified Services	Water Billing Transparency Code & Process Changes	MHP Mini-Grants
Contributing Team	<ul style="list-style-type: none"> • Energy Conservation • Income-Qualified Programs • Water Conservation • Water Field Operations • Water Quality Lab 	<ul style="list-style-type: none"> • Energy Conservation • External - Larimer County • External - Energy Outreach Colorado 	<ul style="list-style-type: none"> • Fort Collins Connexion 	<ul style="list-style-type: none"> • Customer Connections 	<ul style="list-style-type: none"> • Water Conservation

Planning, Development, & Transportation

Project	Education & Outreach	Complaint-Based Inspections & Enforcement	Local Nuisance Code Proactive Enforcement Rollout	Enforcement of Municipal Code (Section 18)	Section 18 Municipal Code Updates	Transportation Access Planning & Projects
Contributing Team	<ul style="list-style-type: none"> • Building Services • Code Compliance • FC Moves • Planning & Development Review • Transfort 	<ul style="list-style-type: none"> • Building Services • Rental Housing • Zoning Services 	<ul style="list-style-type: none"> • Code Compliance 	<ul style="list-style-type: none"> • Code Compliance 	<ul style="list-style-type: none"> • Code Compliance 	<ul style="list-style-type: none"> • FC Moves

Sustainability Services

Project	Education & Outreach	MHP Mini-Grants	MHP Home Improvement Grants (<i>limited to building envelope work for 2025-2026</i>)	Local & State Policy Analysis & Recommendations	Targeted Community Mediation & Community Mediators/Promotoras Program	Eviction Legal Fund Trainings & MHP Resident/Landlord Support	Complaint-Based Inspections & Enforcement	Grocery Rebate Program
Contributing Team	<ul style="list-style-type: none"> • Conflict Transformation Works • Economic Health Office • Environmental Services Department • Healthy Homes • Neighborhood Services • Urban Renewal Authority 	<ul style="list-style-type: none"> • Environmental Services Department • Healthy Homes • Neighborhood Services 	<ul style="list-style-type: none"> • Environmental Services Dept. • Healthy Homes • Neighborhood Services 	<ul style="list-style-type: none"> • Neighborhood Services • Social Sustainability Dept. 	<ul style="list-style-type: none"> • Conflict Transformation Works • External - Community Partners 	<ul style="list-style-type: none"> • External – Community Partners Neighborhood Services 	<ul style="list-style-type: none"> • Rental Housing 	<ul style="list-style-type: none"> • Social Sustainability Department

Sustainability Services | Neighborhood Services

Resident Association & Organizing Assistance	MHP Handbook	Maintenance Responsibilities Code Changes	Limitation of Required Upgrades	Local Complaint System (Access Fort Collins)
MHP Webpage	Maintenance Responsibilities Code Changes	Limitation of Required Upgrades	Local Complaint System (Access Fort Collins)	MHP Webpage

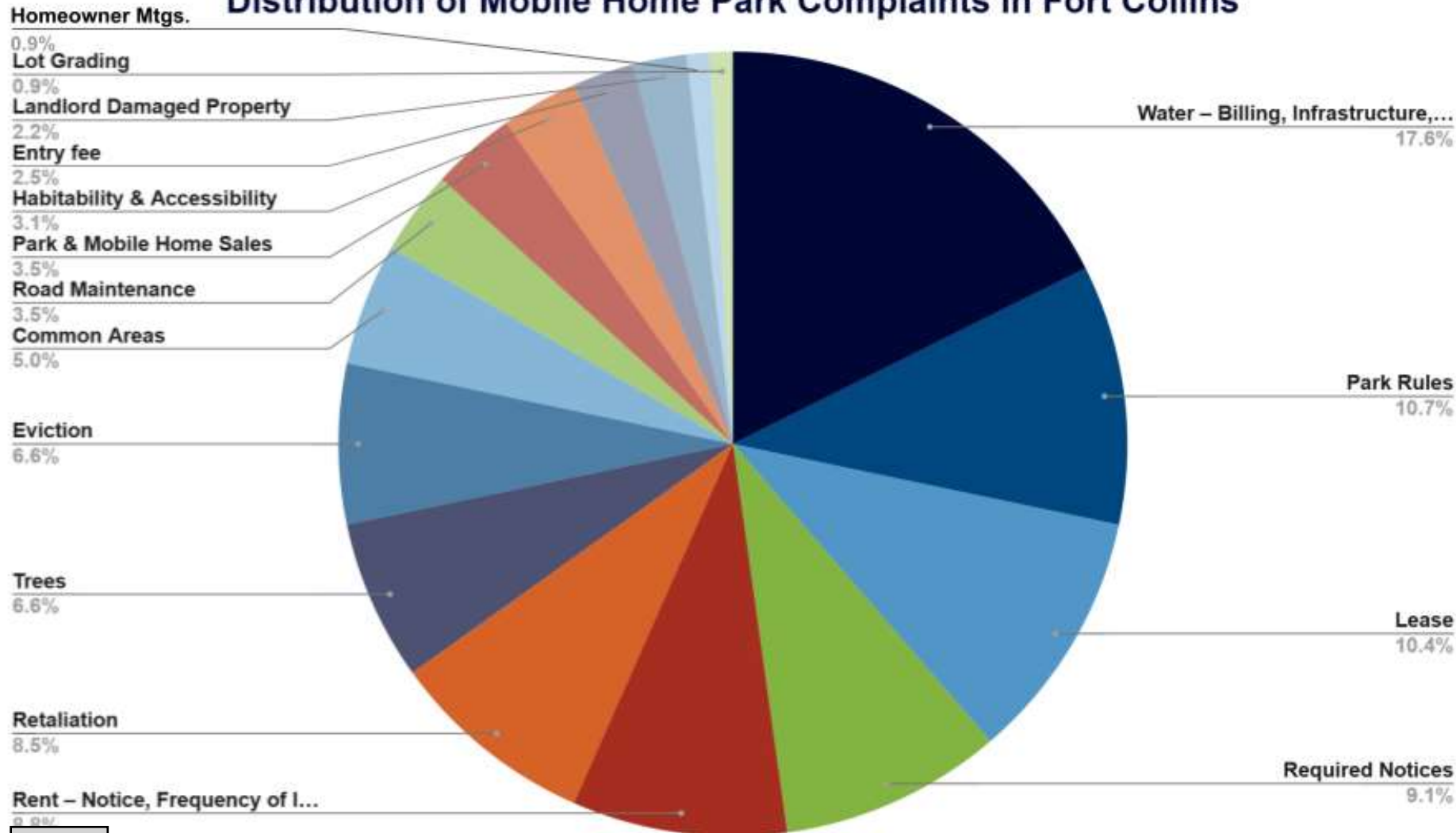
The Colorado Mobile Home Park Oversight Program:

- Began operating in **May 2020**, allowing mobile homeowners, property managers, and owners to **file complaints**.
- **Has subpoena power** for records related to their investigations, **ability to levy** monetary penalties for violations of the Act, and **power to issue** cease and desist orders.
- Requires mobile home park owners to **register annually** and maintains a statewide database of registered parks.



Item 2. IP Complaints

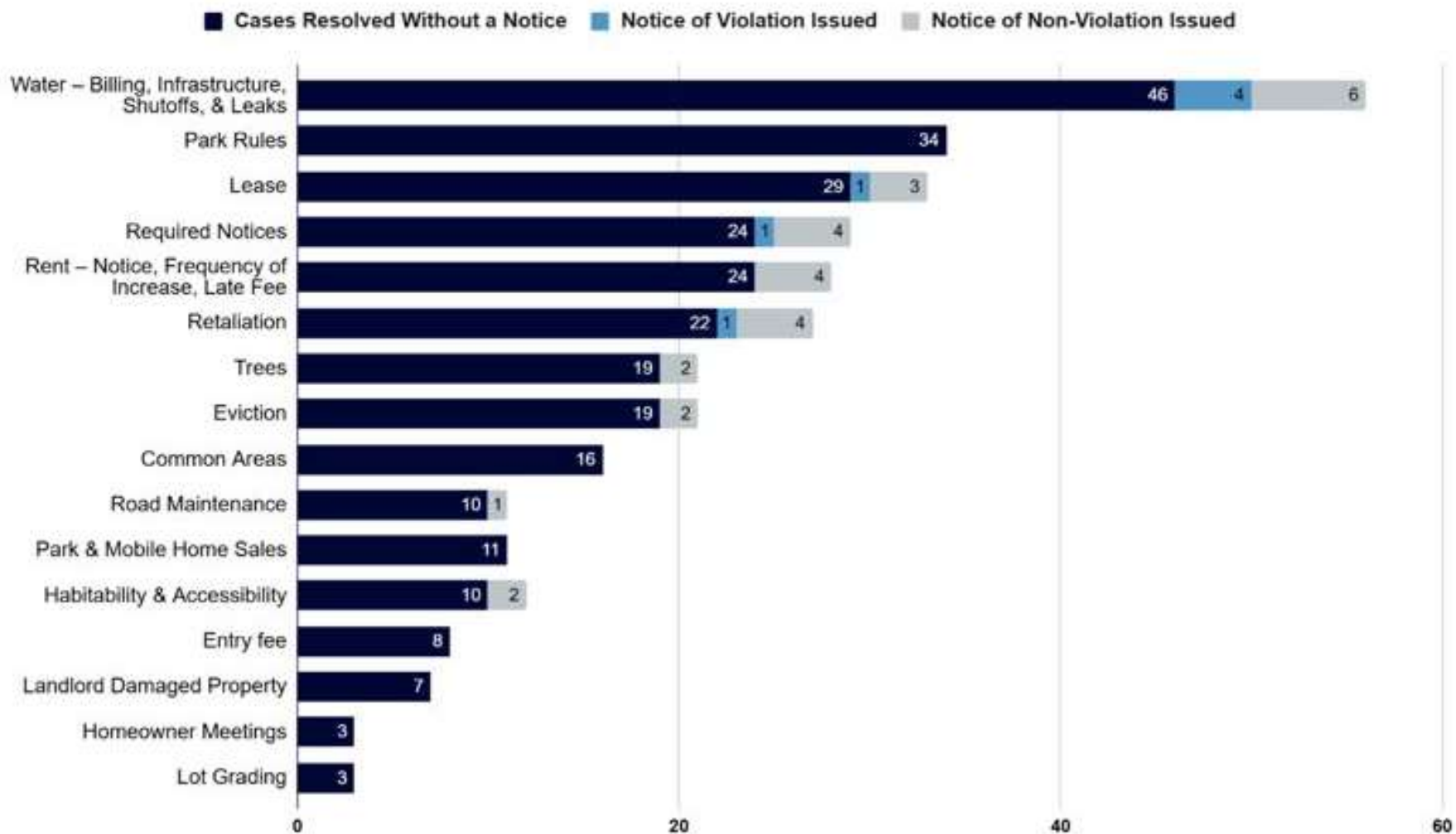
Distribution of Mobile Home Park Complaints in Fort Collins



Key Data

- 318 complaints from Fort Collins residents since 2020
- 29 Notices of Non-Violation
- 7 Notices of Violation
- 11 cases still open

Number of Fort Collins MHPOP Complaints and Enforcement Outcomes



Overlaps & Gaps in MHP Enforcement

Sample of Current MHP Enforcement in Fort Collins

	MHPOP	City Staff	No Enforcement
Water Shutoffs		Fort Collins Utilities assists if shutoff is due to City water line issues	
Water Billing, leaks		Neighborhood Services has billing audit access	
Water & Sewer Line Maintenance & Inspection			
Park Rules			
Accessory Structures			
Fences			
Lease			

MHPOP	MHPOP & City Overlap	City of Fort Collins	None
<ul style="list-style-type: none"> • Park Rules • Lease Terms • Required Notices • Rent Issues • Retaliation • Eviction • Road Maintenance • Park & Mobile Home Sales • Entry Fee • Landlord Damaged Property • Language Access & Barriers (<i>new in 2024</i>) 	<ul style="list-style-type: none"> • Water Shutoffs • Water Billing & Leaks • Posting Emergency Contact • Trees • Homeowner Meetings 	<ul style="list-style-type: none"> • Accessory Structures • Common Areas • Habitability • Lot Grading • Neighbor-to-Neighbor Disputes • Animal Control • Water Quality (<i>with CDPHE</i>) 	<ul style="list-style-type: none"> • Water & Sewer Line Maintenance & Inspection • Fences • Speed Limits • Security Lighting • Availability of Management • Frequent Management Changes • Homeowner's and Renter's Insurance Requirements • Parking & Towing

Item 2. Enforcement Gaps

- **Infrastructure & Maintenance Issues:**
 - No on-the-ground inspectors from MHPOP for complaints like tree assessment, snow removal, or lot grading
 - No oversight by technical experts for maintenance/repair of water lines or enforcement of repairs
 - Limited or no jurisdiction for oversight of road maintenance, streetlights, speeding, fences, or parking issues
- **Resident Barriers to Self-Advocacy:**
 - Fear of retaliation from landlords and no local investigation of retaliation
 - Frequent changes in property management and lack of training
 - No enforcement of manager availability during office hours
 - No state-level mediation services
- **Lack of Coordination Between Agencies:**
 - Confusion over which entity (City or MHPOP) handles specific complaints
 - Navigating issues within a complex network of enforcement agencies (like water access during shutoffs)



Next Steps - Staff Evaluation

	<p>Promote Resident Awareness & Empowerment</p>
	<p>Improve Livability, Habitability, & Safety</p>
	<p>Preserve Housing Affordability</p>

Potential Areas for Staff Evaluation:

- **Ways to coordinate with MHPOP on specific complaint types** that align with City Staff expertise. Explore options for payment or service models to fill gaps in investigations.
- **Cost analysis** to increase local capacity for mediation and community-based promotoras for earlier, efficient resolution of conflict between parties.
- **Partnerships and negotiated investment opportunities with property owners** to provide or assist in making infrastructure assessments and recommendations.
- Coordination of a **template library** for enforceable park rules and lease terms based on MHPOP’s determinations

Potential Low-Cost Activities or Tradeoffs for Existing Resources



Explore avenues for technical assistance, education, or other tools to assist with infrastructure issues. *(Not including repair or replacement of infrastructure.)*



Examine options for City Staff or contractors to assess park conditions and recommend preventative maintenance schedules, repairs, and community plans for road safety, dangerous trees, parking, streetlights, and snow removal.



Improve coordination and strategic planning of MHP work in Fort Collins to better address existing concerns, emerging issues, and available resources.



Strengthen external language access requirements and enforcement for MHPs under the new State law.



Expand existing trainings and educational opportunities to specifically apply to mobile home parks.



Update Municipal Code to protect the right to install fences and require MHP manager certification.

Possible Next Steps - Code Changes

Municipal Code Changes that Would Require Additional Resources

- ◆◆◆◆◆ **Require** annual submission of tree maintenance plans, emergency contact information and office hours, water pressure compliance reports, parking and towing policies; establish timelines to address concerns and penalties
- ◆◆◆◆◆ **Establish** timeline for water infrastructure leak repairs and penalties
- ◆◆◆◆◆ **Establish** the right of entry for educational assessments (upon resident request) of infrastructure
- ◆◆◆◆◆ **Adopt** State requirements and local enforcement for MHP notices
- ◆◆◆◆◆ **Establish** water rebilling methodology and disclosures for MHPs that charge for rent with "water included" or work with MHPOP to close the loophole
- ◆◆◆◆◆ **Authorize** the City to provide emergency water services and portable toilet access for service disruptions longer than 12 hours and charge the MHP for these services
- ◆◆◆◆◆ **Authorize** the City to provide emergency repairs for unsafe/hazardous road conditions and charge the MHP for this service

- 1) Given the increase in complaint resolution at the State level, does Council want to consider local enforcement of issues that are governed by state regulations?
- 2) What priorities does Council have regarding the City's mobile home park work?
- 3) Who else should we bring into the conversation to inform this work?

File Attachments for Item:

3. 2025 Fort Collins Utilities Water Efficiency Plan Update

The purpose of this item is to provide an overview on progress made on the state-mandated Fort Collins Utilities (Utilities) Water Efficiency Plan (WEP) and to provide foundational information ahead of seeking Council review and approval in summer 2025. Staff will describe information learned from extensive public engagement and will present proposed new water conservation goals and areas of opportunity for conservation strategies including voluntary incentives, education, standards, and policy. This item also provides a summary of engagement tactics and results, and equity evaluation, the conservation strategy prioritization process, as well as background on water use and Utilities broader efforts to manager water supply and demand.

February 25, 2025

WORK SESSION AGENDA ITEM SUMMARY

City Council



STAFF

Alice Conovitz, Water Conservation Specialist
Mariel Miller, Water Conservation Manager

SUBJECT FOR DISCUSSION

2025 Fort Collins Utilities Water Efficiency Plan Update

EXECUTIVE SUMMARY

The purpose of this item is to provide an overview on progress made on the state-mandated Fort Collins Utilities (Utilities) Water Efficiency Plan (WEP) and to provide foundational information ahead of seeking Council review and approval in summer 2025. Staff will describe information learned from extensive public engagement and will present proposed new water conservation goals and areas of opportunity for conservation strategies including voluntary incentives, education, standards, and policy. This item also provides a summary of engagement tactics and results, and equity evaluation, the conservation strategy prioritization process, as well as background on water use and Utilities broader efforts to manager water supply and demand.

GENERAL DIRECTION SOUGHT AND SPECIFIC QUESTIONS TO BE ANSWERED

1. Do the proposed conservation goals and strategies align with what Council sees as our community values?
2. Does the WEP work to-date meet “ambitious but comfortable” guidance?
3. What else does Council need to know prior to staff seeking approval of the updated WEP?

BACKGROUND / DISCUSSION

Water is an essential resource for all of us. The City and Utilities have a strong commitment to ensure its efficient use as a key tool to minimize risk of future shortages¹. Utilities is updating its [2015 WEP](#) (Attachment 1), following the key tasks described at the Council Work Session on Feb. 13, 2024 (Attachment 2). The updated plan will:

¹ The [Water Supply Vulnerability Study](#) (WSVS) identified high water demands as a significant vulnerability, noting that it is important to implement conservation and efficiency efforts and track demand trends. The WSVS is available online at fcgov.com/utilities/img/site_specific/uploads/wsvs-final-report.pdf.

- Meet Colorado Water Conservation Board (CWCB) requirements
- Set new conservation goals to (1) reduce the amount of treated water we use within the Utilities water service area and to (2) build resilience of City-owned public landscapes
- Guide water use for Utilities customers and the City organization
- Inform planning decisions and better resource allocation

The WEP applies mainly to treated water use in Utilities' water service area, which encompasses about 60% of the City geographic area and about 80% of the population. By updating our water conservation² goals and strategies, we aim to continue long-term reductions in water demand through a variety of levers available to manage water use - behavioral, regulatory, infrastructure, and economic. Successful demand management and increased landscape resiliency provides reduced risk and gives customers the opportunity to benefit from less water use that leads to lower water bills. Developing more equitable opportunities for program participation and support provides greater community outcomes while improving overall resilience.

The 2025 WEP update will outline a new roadmap for increased water demand management that considers equitable outcomes, integrates with land use planning, and is based on quantitative analysis of potential water savings from individual strategies. The WEP sets a 15-year planning horizon with a 2040 goal. However, the CWCB requires WEP updates every seven years, which is an opportunity to evaluate conservation goals and strategies, demand and climate conditions, and community values.

Alignment and Connection to Overall Water Supply Planning

The WEP aligns with the City of Fort Collins' Strategic Objective ENV 2, "Sustain the health of the Cache la Poudre River and regional watersheds while delivering a resilient, economically responsible and high-quality water supply for all Fort Collins residents." It also aligns with the water utility's mission statement, "We are a One Water Utility, providing exceptional water services for our community through integrated, resilient, and equitable practices and systems." Other City and state policies and plans that align include City Council Priority 7, the Water Supply and Demand Management Policy, Our Climate Future (Big Move #3), and the Colorado Water Plan.

Utilities uses a multi-faceted approach to balance supply and demand to ensure a reliable water supply now and in the future, including storage, a diverse portfolio of water rights, and conservation. The conservation goals and strategies outlined in the WEP are critical tools used to manage variable water demands from diverse water users. Historically, during average and wet precipitation years, Utilities' water rights provide more water than customers use. During extended hot and dry periods, current supplies may not meet demands while also maintaining a stored reserve of water for emergencies. Furthermore, we anticipate a future where climate impacts and population growth increase demands and put pressure on Utilities to restrict water use. Additional information is described in materials presented at the Council Work Session on Feb. 13, 2024 (Attachment 2).

Collaboration with Other Water Providers

Certain areas within City limits are served by neighboring water providers. Other water providers have their own WEPs that describe goals and strategies for their service areas; however, Utilities values these partnerships and continues to look for ways to collaborate. To-date staff have met with East Larimer County and Fort Collins-Loveland Water Districts to discuss the WEP. Staff will incorporate information about regional partnership opportunities in the WEP and plan to pursue partnership opportunities in the future.

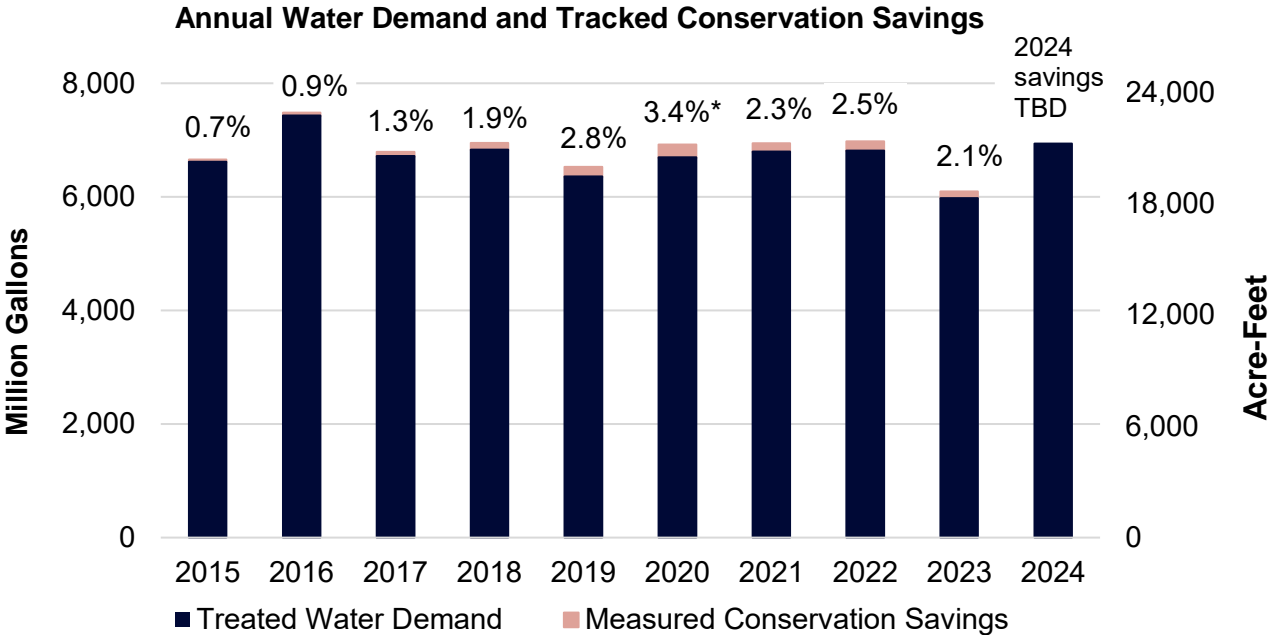
² Utilities' Water Conservation department focuses on water demand management through a variety of behavior-based conservation practices and technology-based efficiency measures that extend water supplies either directly through water savings or through substituting alternative supplies such as reuse. For simplicity and consistency with our department name, the term "conservation" is used throughout this document and the WEP to refer to both behavioral and technology-based demand management.

Water Use and Demand Management Overview

Utilities currently provides water to approximately 32,900 residential and 2,900 commercial customer accounts. The 2024 estimated residential population served was 139,300. On average, residential customers use about 60% of the treated water delivered each year and commercial customers use about 40%. Commercial customers include large irrigation-only accounts and landscapes maintained by homeowner associations. Each year, indoor water use accounts for about 57% of total treated water used, while outdoor and seasonal uses are about 43% of the annual total on average. The [2023 Water Conservation Annual Report](#) (Attachment 3) summarizes treated water demands by sector and savings from conservation programs.

Since 2000, population has grown by 28% while water use within Utilities’ water service area has decreased by 42% per capita. However, that rate slowed in recent years. From 2020 to 2023, average per-person water use was 135 gallons per capita per day (GPCD), 4% above the current 2015 WEP goal of 130 GPCD by 2030. Utilities met this goal once, during the high-precipitation year of 2023, with 122 GPCD.

Utilities water conservation programs lowered overall annual water demand by 135 million gallons (415 acre-feet) on average from 2015 to 2023, the eight-year period since the current WEP was approved (Figure 1). This is about 2% of Utilities’ average treated water demand for the same eight-year period (6.68 billion gallons or 20,500 acre-feet³). A portion of estimated annual savings will persist into future years, such as savings from efficient toilet and landscape installations. Many other conservation strategies, such as educational campaigns, and external influences, like weather, also generate water savings but are challenging to quantify and not included in annual water savings totals.



* 2020 included 30 days of mandatory restrictions due to infrastructure project & wildfire; conservation program savings were estimated to be 1.9% without mandatory restrictions.

Figure 1. Annual water demand and tracked conservation program savings for Utilities customers (excludes wholesale and unique large contractual deliveries).

³ Demands presented in this AIS include distribution system losses and exclude wholesale and unique large contractual deliveries, which are not a primary focus of conservation activities.

Demand is expected to increase due to rising temperatures and residential and commercial growth. Figure 2 presents historical residential and commercial customer demand, including non-revenue losses from treatment and distribution, with a range of projected future demands based on modeled growth and climate scenarios. Although a specific future demand cannot be predicted with certainty, implementing active water conservation strategies can lower the projected future demands.

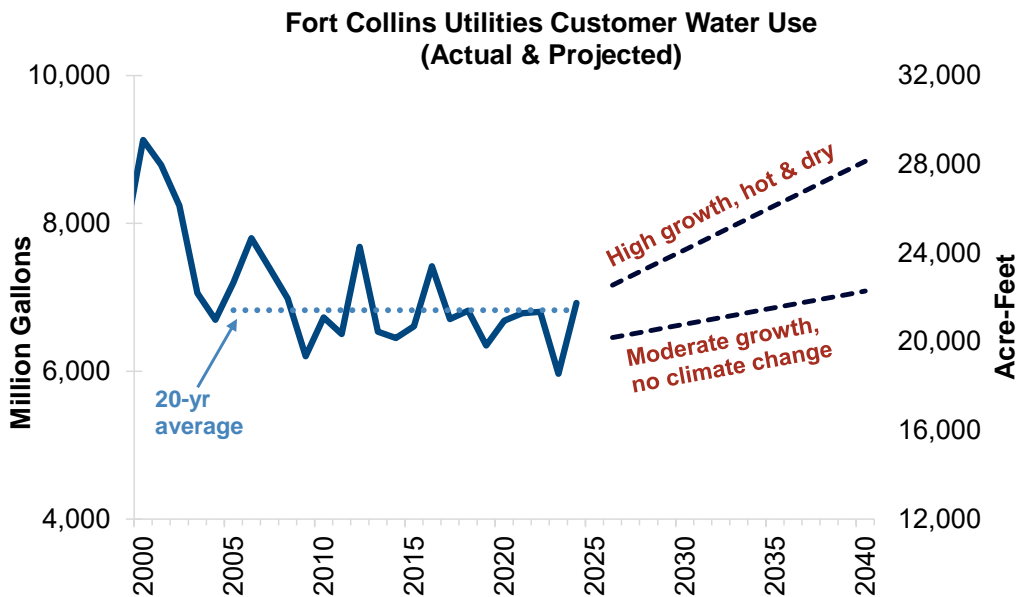


Figure 2 Historical and projected water use for Utilities customers (excludes wholesale and unique large contractual deliveries).

WEP Update Process

The CWCB requires water providers to prepare WEPs to outline how they plan to enhance water conservation and efficiency to combat increasing competition and demand for water. Utilities received grant funding (\$160,000) from the CWCB and a one-time budget enhancement offer (\$145,000) to fund consultant support with engagement and analysis. The Water Conservation department began work in January 2023 and targets completion by summer 2025.

The updated 2025 WEP will replace the 2015 WEP. The 2025 WEP will modernize previous versions by setting new service area and City conservation goals and strategies based on recent community and staff engagement, an equity evaluation, and updated analysis of water use and potential conservation savings. The updated WEP will also identify opportunities to lower water use at City facilities and improve landscape resilience on the City’s public parks, streetscapes, and open spaces.

Engagement

Community and staff input are vital to shaping the updated WEP and associated conservation goals and strategies. Our engagement strategy drew on the One Water integrated and collaborative planning approach, with tactics to both broadly engage the whole community while focusing resources on connecting with disproportionately impacted communities⁴. It all culminated to develop inclusive and community-driven water conservation goals and strategies.

⁴ The WEP update identified disproportionately impacted community groups based on the 14 historically underrepresented groups identified in Our Climate Future, as well as additional groups, like renters, who face many barriers to both participating in and benefiting from water conservation programs and strategies.

From 2023 through June 2024, engagement captured over 5,000 touchpoints via: a survey (1,319 responses), Our City web page, advertisements, in-person meetings hosted by compensated community consultants, focus groups and meetings with targeted water users including City departments, HOAs, and small businesses, meetings with community members who identify with one or more disproportionately impacted groups, consultant-led one-on-one interviews, and input from the City's Climate Equity Committee⁵. Staff sought to reduce barriers to participation in engagement through collaborating with community consultants, providing Spanish translations, hard copies of the survey, tabling in public spaces, hosting meetings outside typical working hours, and providing food, childcare, and conservation giveaways at meetings. Engagement tactics and results are summarized in Attachment 4, *Fort Collins Water Efficiency Plan Engagement Synthesis*.

Staff organized engagement results into themes to guide conservation goal and strategy development.

Community values that inform conservation goals:

- Concerns about water scarcity and providing for future generations
- Willingness to take action, but want everyone to share in that responsibility
- Support for landscape changes away from turf grass

The community generally supported strategies that showed impact by lowering demand at multiple water use levels - individuals, highest users, and City properties. The characteristics of these conservation strategies are as follows:

- Support upgrades to water-efficient fixtures for both indoor (e.g., plumbing) and outdoor (e.g., irrigation) uses by making them free or inexpensive
- Reduce existing turf and encourage water-efficient landscapes
- Support customers with leak issues and by installing efficient equipment
- Use regulations to manage some water uses, including new growth, non-functional outdoor spaces, commercial users, and the highest water users
- Support inexpensive actions that save money
- Provide more education for everyone, specifically:
 - Target HOAs, landscapers, homeowners, and disproportionately impacted communities with resources specific to them
 - Remove barriers by coming to people in places and ways where they are already gathering and comfortable

Successful implementation of water conservation strategies will benefit from ongoing alignment with the engagement themes and from maintaining the community and staff relationships that were fostered during WEP engagement. This will facilitate water use understanding and conservation opportunities between Utilities and our community, especially City departments and disproportionately impacted community members.

⁵ The Climate Equity Committee (CEC) was formed to support the equitable implementation of Our Climate Future.

Equity Evaluation

Equity is integrated into the WEP update process, through (1) the engagement activities described above, (2) selection of conservation strategies, and (3) implementation of conservation strategies.

Consultants developed a custom equity evaluation process focused on water use and conservation and refined it based on input from one-on-one community interviews, WEP engagement, the Climate Equity Committee, and the City's Equity Office. The two-step equity evaluation process involves first examining each current and potential conservation strategy for "red flags" such as barriers to participation or negative unintended consequences. Strategies that are likely to support positive equitable outcomes were elevated with higher scores in the strategy prioritization process described below. In the second step of the equity evaluation process, staff will include equity in conservation strategy implementation planning by applying a series of questions designed to identify opportunities to increase equitable outcomes.

Proposed Conservation Goals

The updated WEP will continue Utilities' historical trend of setting impactful goals that build on past successes by presenting two goals to guide Utilities, City, and customer actions. The 2025 goals reflect community feedback, staff input, and a commitment to take action now to build resilience and minimize future water shortage risks:

- **Goal 1:** All customers contribute to lowering annual water demand by 3% (about 225 million gallons or 690 acre-feet) by 2040 to reduce risk of shortages.
 - The WEP will set an overall water conservation goal that applies to all treated water use within Utilities' water service area, including both customer and City water use. The objective of this overall goal is to gradually and consistently lower demand to minimize the frequency and/or magnitude of shortages in a hotter, more populated future; we anticipate this amount of savings would offset increasing demands driven by an average annual temperature increase of over 1°F between now and 2040.
 - Meeting this goal would require increasing the volume of annual conservation savings by approximately 40% over the current average savings of 135 million gallons (MG) per year.
- **Goal 2:** The City builds resilience by improving outdoor water efficiency across City-owned landscapes to benefit our community and environment.
 - For the first time, the WEP will set a goal directed at the City's water use, which includes both treated and raw water and properties outside of Utilities' water service area. The goal for water conservation on City-owned landscapes is intended to contribute to the overall WEP water conservation goal by lowering municipal water use, building resiliency in our public landscapes to prepare for a hotter future, prioritizing water use for places that most benefit the community, and creating highly-visible projects that inspire water-saving actions by individuals and businesses.

Staff will track specific quantitative metrics, including overall water use, non-revenue losses, water conservation program savings and participation rates, and actions like irrigation upgrades and turf removal on City properties. The intention of these goals is to prepare for a hotter and more variable climate by minimizing the potential frequency and magnitude of future water shortages and by building long-term landscape resilience. Additionally, by shifting away from a GPCD metric⁶, Utilities aims to

⁶ This updated overall goal sets a new target and uses a different metric than the GPCD-based goals set previously. Customer feedback noted that a GPCD metric isn't meaningful to customers. For example, it was unclear how an individual's water use (as

encourage public participation in conservation by helping all water users see themselves in the goals and strategy offerings. The previous GPCD metric was a system-wide value that included both residential and commercial use, making it hard for customers to understand how it relates to their individual use. Furthermore, the methods to calculate GPCD vary, which adds further confusion and limits the ability to compare across water providers, as discussed in Attachment 2.

Areas of Opportunity and Conservation Strategy Selection Process

Utilities already has a robust water conservation program with activities that touch on many different uses and affect the entire service area. The Water Conservation team aims to continue to build on effective existing programs, incentives, and policies, as well as develop new strategies for conservation. Staff evaluated current and potential new conservation strategies using a number of criteria, including water savings, cost, ease of implementation, community acceptance, customer reach, and co-benefits such as equitable and environmental outcomes.

A set of strategies associated with lowering the City's water use (supporting proposed goal #1) and advancing conservation and resilience on City-owned landscapes (supporting proposed goal #2) was developed through collaborative meetings and engagement with cross-departmental staff and identifying conservation and resilience actions that align with their existing plans, policies, practices, and available funding.

The following areas of opportunity are the focus of conservation strategies prioritized in the 2025 WEP update:

- Behavioral (e.g., education, technical assistance, voluntary actions)
- Regulatory (e.g., water restrictions, policies, land use and plumbing code changes)
- Economic (e.g., incentives, utility rate structure, development fees)
- Infrastructure (e.g., metering, leak detection, maintenance, greywater)

Water conservation strategies are intended to be implemented, tracked, and refined over time. This cultivates and supports a water efficient, adaptive, and knowledgeable customer base through education and cost-effective water efficiency programs while minimizing water shortage risk and supporting the City's Strategic Plan. Strategies can impact the entire community and we have selected a set of strategies that we expect to meet our goals; provide opportunities for all customers, including disproportionately impacted groups and those who have had low historical participation rates; provide customized strategies to meet high-use and unique customer sector needs; continue doing what works well and is liked by customers; and lead by example as a municipality.

Water Use and Savings Analysis

The WEP update involves estimating potential water savings associated with conservation strategies and evaluation of their impact on overall demand. Utilities' future water demands are largely dependent on population change and growth patterns, the rate of commercial and industrial development, and climate influences. System losses from treatment and distribution also influence overall demand. A range of projected future demands based on possible growth and climate scenarios is shown above in Figure 2.

seen on their bill) related to a GPCD goal. For most residential customers, on average, their individual GPCD or even gallons per household per day are much lower than the system-wide GPCD; however, during the summer irrigation months, it may be significantly higher. For customers in multi-family or multi-business units that are not sub-metered, there is no way to connect to the single system-wide goal.

Utilities worked with consultants to develop a customized model, called the Water Efficiency Tool (WET), to evaluate the complex interactions between climate impacts, growth and estimated water savings. This tool helps us estimate the effectiveness of various strategies to achieve goals in the future.⁷ WET was designed to enable examination of the potential water savings of certain conservation strategies and will be used to inform strategy selection for this WEP update and into the future.

Water savings potential was estimated for conservation strategies using WET results, paired with historical program participation data and estimates from industry resources like the Colorado WaterWise Best Practices Guidebook⁸. Staff has conducted a preliminary analysis of savings estimates and believes the goal of 3% reduction by 2040 is achievable. Additional modeling analysis will further refine estimations and strategy selection. This step is underway. In addition to measurable savings from conservation strategies, Utilities might experience further demand reduction driven by educational programs, passive savings related to widespread technological efficiency improvements, or water rate changes.

Implementation and Cost

As part of the WEP process, we have developed strategies that not only align with feedback from engagement, but also target high water savings impact with low cost to Utilities and customers to most effectively and efficiently reach the 2040 goals. The portfolio of strategies proposed in the WEP was holistically evaluated and includes continuation of some current actions as well as new strategies. Staff anticipate gradually implementing the strategies outlined in the WEP, following all necessary steps to seek approval and funding, beginning in 2026 and continuing through the seven-year WEP renewal cycle.

Based on our strategy analysis, we anticipate achieving WEP goals without driving much new funding need and limited need for new funding sources or future budget enhancements. For Goal 1 (overall water savings) staff identified opportunities to reallocate our budget (shifting our funding to different strategies) potential low-cost opportunities with strategic partnerships, and third-party support. For Goal 2 (City landscape resilience), many of the strategies align with planned or ongoing work. In addition, there are also new funding opportunities for landscape projects including the 2050 tax, Water Conservation's ongoing budget, and external grants.

It is important to also consider the potential future costs resulting from inaction now. Climate impacts are estimated to increase costs in several ways. Insufficient water demand management now could impact Utilities and City properties through cost and staffing impacts such as needing more water storage, water right purchases and landscape impacts related to water restrictions from more frequent and severe water shortages. To customers this could mean increased fees and rates and loss of landscaping, as well as water restrictions that can cause economic impacts.

⁷ The WET was developed specifically to evaluate how water conservation strategies impact customer demands in a variety of scenarios through 2040. The intended outcome (conservation planning) and hybrid econometric/end-use specific projection mechanisms in WET are distinct from past GPCD-based projections (such as used long-term supply planning and for the Halligan Water Supply Project) or the demand estimation tool model, which supported risk analyses in the 2019 Water Supply Vulnerability Study. Instead, the WET focuses solely on the subset of total water use associated with billed residential and commercial customer demands. The WET was not used to predict future large contractual or wholesale demands, does not incorporate storage reserve targets, and does not consider water supplies.

⁸ Available online at: <https://indd.adobe.com/view/a66fdb02-50c6-4ec3-8fea-4db473212faf> .

NEXT STEPS

Anticipated next steps from February to July 2025:

- Complete remaining work to finalize decisions and prepare plan
- Q2 2025: 60-day public comment period and CWCB's review, seek Board and Commissions' recommendations
- Q3 2025: Seek City Council approval via resolution, then submit to CWCB
- 2026-2032: Implement prioritized water conservation strategies
- 2032: Next state required WEP update submittal to CWCB (seven-year renewal cycle)

ATTACHMENTS

1. 2015 Water Efficiency Plan
2. Work Session Materials, February 13, 2024
3. 2023 Water Conservation Annual Report
4. Engagement Summary Memo
5. Presentation

City of Fort Collins

2015

Water

Efficiency

Plan

Item 3.

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ACRONYM LIST

AF	Acre Foot (equals 325,851 gallons)
AMFC	Advanced Meter Fort Collins
BFO	Budgeting for Outcomes
BMP	Best management practice(s)
C-BT	Colorado-Big Thompson
CAP	Climate Action Plan
CWCB	Colorado Water Conservation Board
ELCO	East Larimer County Water District
FCLWD	Fort Collins - Loveland Water District
GMA	Growth management area
GPCD	gallons per capita per day
LCU	Large commercial users
MG	Million gallons
MGD	Million gallons per day
NCWCD	Northern Colorado Water Conservancy District or "Northern Water"
NEPA	National Environmental Policy Act
NPIC	North Poudre Irrigation Company
PRPA	Platte River Power Authority
RWR	Raw water requirement; requirement to provide water for any new development that occurs within the Utilities water service area
SWSI	Colorado Water Conservation Board's Statewide Water Supply Initiative
TAZ	Traffic analysis zone
WEP TAG	Water efficiency plan technical advisory group
WSDMP	Water Supply and Demand Management Policy, 2012
WSSC	Water Supply and Storage Company
WTF	Water Treatment facility
WFCWD	West Fort Collins Water District
WQA	Winter quarterly average (Dec, Jan and Feb use)

EXECUTIVE SUMMARY

The City of Fort Collins Utilities has a strong commitment to ensure the efficient use of its natural resources. The Utilities' Water Conservation Program is nearly 40 years in the making and has resulted in lower per capita water use, even as population has grown significantly. These programs have benefited the Utilities by delaying or avoiding significant capital costs and have benefited customers through reduced water bills. The additional benefits to the City and the community include development of a conservation ethic, demonstration of a commitment to sustainability, support of economic health, enhanced resilience during drought periods, preparation for potential effects of climate change, and provision of water for other beneficial purposes such as agriculture, ecosystem services, recreation, and aesthetics.

This Water Efficiency Plan (WEP) is an update to the Water Conservation Plan approved by the Colorado Water Conservation Board in 2010. "Water efficiency is doing more with less – not doing without" – the term "efficiency" has replaced "conservation" because efficiency includes conservation and is a more appropriate term for the range of tactics needed in Colorado.¹ The 2010 Plan set a goal of 140 gallon per capita per day (GPCD) by the year 2020. This updated Plan proposes a new goal of 130 GPCD by 2030. The GPCD in 2014, normalized to account for weather, was 143 (without weather-normalization, GPCD was 139); for reference, the normalized GPCD in 2001 was 198.

Efficiency and Conservation activities

Fort Collins Utilities has a robust water conservation program with activities that touch on many different uses and affect the entire community. The Water Conservation team will continue to build on existing programs and develop new approaches to conservation. Programs will be evaluated for effectiveness in water efficiency, customer service, and technical excellence. The overall mission is to cultivate a water efficient, adaptive, and knowledgeable customer base through education and cost-effective water efficiency programs while supporting the City's Strategic Plan and its social, environmental, and economic health.

The Water Conservation team has identified five key areas of opportunity for greater water efficiency:

- Leverage Advanced Meter Fort Collins data and capabilities
- Promote and support greater outdoor water efficiency
- Encourage greater integration of water efficiency into land use planning and building codes
- Expand commercial and industrial strategies
- Increase community water literacy

Actions will be guided by the following implementation principles:

- Employ sophisticated data-driven processes and decision-making
- Coordinate and support symbiotic efforts within Utilities and across the City
- Cultivate new and bolster existing community and statewide partnerships

¹ <http://cwcb.state.co.us/water-management/waterEfficiency/Pages/main.aspx>

Plan Development Process

The content and organization of this plan was developed using the Colorado Water Conservation Board's municipal water efficiency plan guidance document, as it is a state requirement to submit an updated Plan every 7 years. This plan was developed with input from the community and a technical advisory group: Water Efficiency Plan Technical Advisory Group (WEP TAG). The WEP TAG included Utilities and City staff as well as Water Board members. A draft of this WEP was presented to City Council at the October 13, 2015 work session and received positive feedback. Following this presentation, Water Conservation staff held a public comment period and performed additional outreach activities. This plan was approved and adopted by the Fort Collins City Council on March 1, 2016.

Note: this document includes several technical terms and abbreviations. An acronym list is provided after the table of contents for reference and a glossary is included at the end of the document to provide additional technical detail.

1.0 PROFILE OF EXISTING WATER SUPPLY SYSTEM

The City of Fort Collins is located 65 miles north of Denver in Larimer County, nestled between the Rocky Mountains foothills and the Eastern Plains of Colorado. Horsetooth Reservoir borders Fort Collins to the west and the Cache la Poudre River winds its way through north Fort Collins before reaching the South Platte River to the east of Greeley, CO.

The Fort Collins Utilities service area boundaries for water do not perfectly match the Fort Collins city limits.² Fort Collins-Loveland Water District (FCLWD) and East Larimer County Water District (ELCO) provide water to some areas within the city limits and will most likely serve additional city residents in the future.³ Furthermore, Fort Collins Utilities provide water service to some customers beyond the city limits; this is primarily northwest of Fort Collins, including providing wholesale water to West Fort Collins Water District (WFCWD). Figure 1.1 shows the Utilities service area and the neighboring water district services areas with respect to the Fort Collins Growth Management Area (GMA) and the official city limits. Fort Collins Utilities currently serves about 75% of Fort Collins' residents and businesses.

Note that this Chapter contains an abbreviated set of information on the Water Supply System; for a more detailed account, see the City of Fort Collins' Water Supply and Demand Management (Policy) Report (dated April 2014)⁴. The updated Policy, which was approved by City Council in late 2012, serves as a guide for the Fort Collins Utilities to a sustainable and integrated approach to 1) ensuring an adequate, safe, and reliable supply of water for the beneficial use by customers and the community, and 2) managing the level of demand and the efficient use of a scarce and valuable resource consistent with the preferences of customers and in recognition of the region's semi-arid climate.

² Fort Collins Utilities is an enterprise and does not receive funds from the City of Fort Collins general fund. Water Conservation is entirely funded by the Water Fund.

³ The Fort Collins Utilities service area is landlocked by neighboring water districts. There will be little new development and mostly re-development of existing properties within the service area boundaries. Most land available in Fort Collins for new development is outside of the water service area. This Plan only applies to the Utilities' water service area except where noted, such as collaboration with neighboring water districts.

⁴ <http://www.fcgov.com/utilities/what-we-do/water/water-supply-demand/>

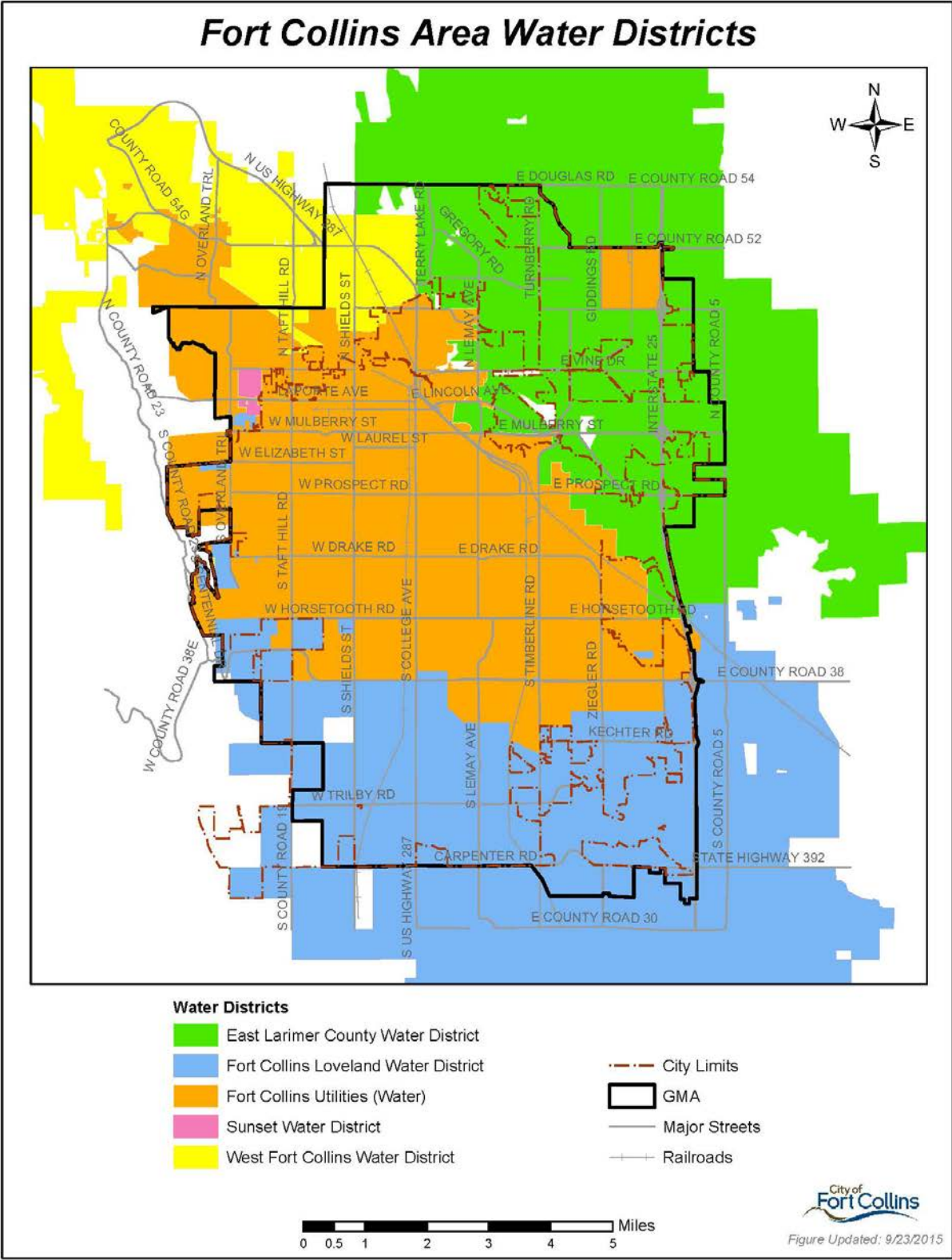


Figure 1.1: Water Service Area and surrounding Water District boundaries

1.1 OVERVIEW OF EXISTING WATER SUPPLY SYSTEM

The Fort Collins Utilities' water sources are surface supplies. The Utilities water supplies come from two major systems: the Cache la Poudre River (Poudre River) Basin and the Colorado-Big Thompson (C-BT) Project, often referred to as "Horsetooth Water".⁵ The City's water supply and treatment system consists of several key facilities, which are illustrated in Figure 1.2 and include the Poudre River diversion structure and pipelines, Joe Wright Reservoir, Michigan Ditch, Horsetooth Reservoir, the Water Treatment Facility, the Mulberry Reclamation Facility, and the Drake Reclamation Facility.⁶ Figure 1.2 includes Halligan Reservoir, which is currently owned by Fort Collins Utilities but operated by the North Poudre Irrigation Company (NPIC). A discussion of the Halligan Water Supply Storage Project is located in the "Storage" portion of the System Reliability section below. The City's Water system contains approximately 540 miles of pipeline and 34,298 connections. In addition to treated water, the City diverts about 3,000 to 4,000 acre-feet of raw water to irrigate City parks, golf courses, a cemetery, greenbelt areas, some school grounds, and for the purposes of meeting some contractual raw water delivery obligations. In 2014, the City of Fort Collins Utilities supplied 7.4 billion gallons of water to approximately 130,200 people.⁷

From the beginning of the City of Fort Collins Water Utility in the 1880s up to the early 1960s, the City depended primarily on direct flow rights to the Cache la Poudre River (Poudre River) to satisfy its water demands. Direct flow rights are water rights that can be taken for direct use, as opposed to storage rights that can be taken for later use. The first water right was obtained in 1889 and four other senior direct flow rights were obtained in the early 1900s; these currently allow the Utilities to divert an average of 11,300 acre-feet of raw water annually. In the late 1950s, the Utilities acquired its first 6,000 units of Colorado-Big Thompson (C-BT) Project water. To date, the Utilities owns about 18,855 units of CB-T water. In addition to these two major sources of water, the Utilities began to acquire shares of several local irrigation company stocks starting in the 1960s, in part to expand the Utilities' water supply portfolio and in part as developers turned over the water rights from lands they were building over in order to satisfy the raw water requirements for new development.⁸

⁵ Horsetooth Reservoir borders the City of Fort Collins and is an East Slope terminal reservoir in the C-BT system. For more information on the Colorado-Big Thompson Project, which is operated and maintained by Northern Water and the U.S. Bureau of Reclamation, please see: <http://www.northernwater.org/WaterProjects/C-BTProject.aspx>

⁶ The Water Treatment Facility chemically treats up to 87 MGD (million gallons per day). The Mulberry Water Reclamation Facility employs physical, biological, and chemical processes to treat up to 6 MGD. The Drake Water Reclamation Facility employs similar processes and treats up to 23 MGD of wastewater.

⁷ One acre-foot of water is equivalent to 325, 851 gallons of water. 7.4 billion gallons of water is approximately equal to 22, 710 acre-feet of water.

⁸ The use of "City" vs. "Utilities" may be confusing in this section. Nearly all water rights are in the name of the City of Fort Collins; however, the majority of the water rights are utilized and administered by Fort Collins Utilities. The Parks Department and the Natural Areas Department also use some of the water rights and are responsible for them. The districts (ELCO and FCLWD) serve some residents and businesses within the Fort Collins GMA, however, they each have their own water rights.

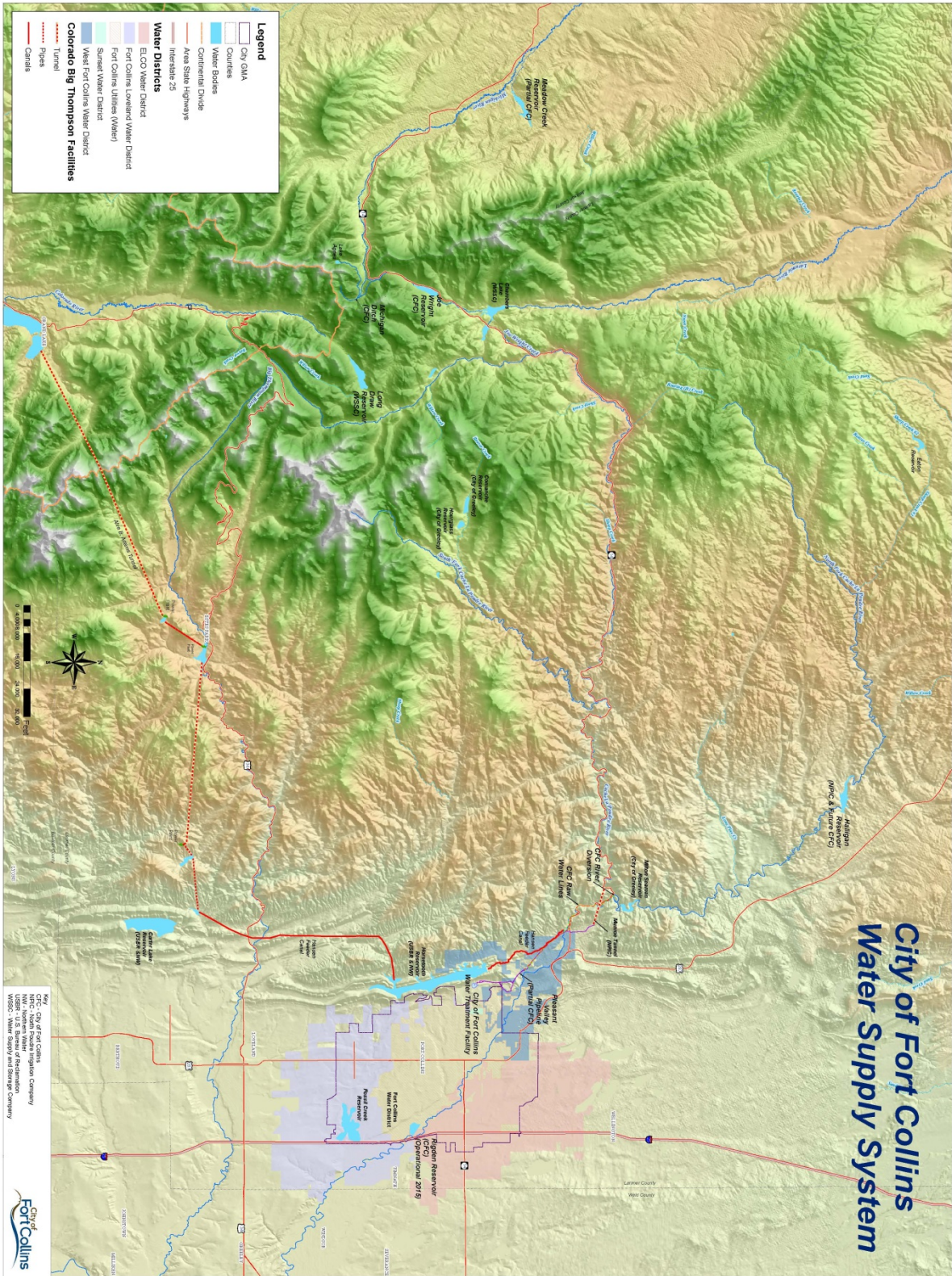


Figure 1.2 City of Fort Collins Utilities Water Supply System Map

Table 1.1 shows the average annual yield of the Utilities' various water sources. For more detailed information on each supply source, see Appendix A. The Utilities' average annual raw water yield as of 2014 is approximately 75,245 acre-feet, but the actual treatable average annual yield is closer to 55,000 acre-feet per year. The treatable water right yield is lower due to legal constraints, such as agricultural rights that have not been converted for municipal use, ditch losses, water right volumetric limitations and return flow obligations. The Utilities' modeling has shown that the current firm yield of its system is approximately 31,000 acre-feet per year.⁹ During the summer months, however, much of the Utilities' water rights yield more water than the demands of the service area customers. Both the raw water yield and treatable yield are reduced in dry years, requiring more storage water to meet demands.

Table 1.1 Raw Water Yield in 2014

Source	acre-feet
Poudre River Direct Flow	11,300
Joe Wright-Michigan Ditch	5,500
Northern Water (CBT)	14,330
North Poudre Irrigation Company ¹⁰	19,850
Pleasant Valley & Lake Canal Company	7,760
PRPA Reuse Plan	2,310
Southside Ditches ¹¹	10,760
Water Supply and Storage Company	2,240
Miscellaneous ¹²	1,195
Average Raw Yield Total	75,245

Note: Yields are the approximate average annual yields and are not representative of a dry year conditions and do not reflect other constraints of the system.

⁹ This assumes a 1-in-50 year drought; Firm yield is commonly determined by calculating the maximum constant annual demand (quantity of water) that can be met with the available supply during a specified multi-year hydrologic period.

¹⁰ These sources are only partially available for municipal use.

¹¹ The Southside ditches refer to Arthur, Larimer No. 2, New Mercer, and Warren Lake irrigation companies.

¹² These are relatively small contributors to the overall raw yield and include shares in Chaffee Ditch, Boxelder Irrigation Ditch Company, Lake Canal Company, Loudon Irrigating Canal and Reservoir Company.

Reusable Supplies:

An important part of the City's water supplies are sources that are reusable. Typically, this is water that is imported from another basin or comes from specific in-basin sources that may be totally consumed through succession of identified uses. For Fort Collins, this includes much of the Michigan Ditch and Joe Wright Reservoir water and portions of the Southside Ditches water that has been converted from agricultural use to municipal use.

A sizeable portion of the Utilities treated water supplies are reusable.¹³ Much of this is used as part of a Reuse Plan which involves the City, Water Supply and Storage Company (WSSC) and Platte River Power Authority (PRPA)¹⁴. Reusable sources owned by the City and WSSC are used Utilities' customers and the reusable effluent is used by PRPA at their Rawhide Power Plant facility. In turn, PRPA provides Windy Gap water to the City.

Raw Water Requirements:

Developers are required to provide water for any new development that occurs within the Utilities water service area. The amount is determined by the Utilities; the developer is assessed a raw water requirement (RWR) for any new development that occurs within the service area. This practice originally began in the 1960s when two acre-feet per acre of land developed was required. Because water use varied considerably depending on the type of use for any given area, a study was done in 1983-84 to develop the existing method of assessing the RWRs, which attempts to more closely assess the requirements based on actual use.

The formula for residential development considers the density, and an estimate of indoor and outdoor use. The RWR is calculated by multiplying the water use estimate by a "water supply factor" that is used to reflect the variability in supply and demand from year to year as well as other unaccounted for water use.¹⁵ Non-residential requirements are based on tap size. Water use is analyzed for all non-residential customers for a given tap size and the requirements are based on those results. Since there is a lot of variability within each tap size, a raw water surcharge is assessed for any annual use exceeding an annual allotment.¹⁶

Developers and builders may satisfy the RWR by either turning over water rights acceptable to the City or paying cash in-lieu-of the water rights. The City uses in-lieu payments to purchase additional water rights or implement other means of increasing the firm yield of the Utilities' water supply, such as developing storage capacity. The in-lieu fee is evaluated and, if needed, revised to reflect the costs associated with developing the required water supplies (e.g., market price of water rights).

¹³ This refers to the total amount of water used, not to the total amount of water feasibly available in a given year.

¹⁴ 2012 Water Supply and Demand Management Policy (2014 Report).

¹⁵ The current water supply factor is 1.92. This equation is used to determine the residential RWR is as follows:

$$RWR = 1.92 \times [(.18 \times \text{Number of Dwelling Units}) + (1.2 \times \text{Net Acres})]$$

¹⁶ Requirements vary from .90 acre-feet for a 3/4 inch meter to 9.60 acre-feet for a 2-inch meter. For larger meters, the RWR is based on an estimate of water use.

1.2 WATER SUPPLY RELIABILITY

Fort Collins Utilities is responsible for providing an adequate and reliable supply of water to its customers. The planning criteria describe the water demand that can be reliably served under specified drought conditions and the margin of safety the Utilities should have in place to address unforeseen circumstances.¹⁷ The three main planning criteria used to develop the City's water supply system are 1) the drought criterion, 2) the storage reserve factor and, 3) the planning demand level. These criteria determine the amount of water supplies and facilities the Utilities' needs (e.g., the amount of storage required) and should be conservative to account for inherent uncertainties in water supply planning.

Drought Criterion

The drought criterion states that in a 1-in-50 year drought the Utilities should be able to meet the planning demand level. This is an important criterion because not only will demands often be higher in drought periods due to less precipitation, water supply systems generally will also yield less water. The Utilities has used a 1-in-50 year drought criterion since the original 1988 Water Supply Policy.

Storage Reserve Factor

A storage reserve factor is a criterion to have a certain percent of annual demand in storage through the drought criterion (1-in-50 year drought). This storage reserve provides a short-term supply to address emergency situations, such as pipeline shutdowns (which can and have occurred during drought conditions). The Policy calls for a 20 percent storage reserve factor, which equates to about 3.5 months of winter supplies or about 1.5 months of summer supplies.

Planning Demand Level

The planning demand level is the amount of demand the water supply system should be developed to meet. Since acquiring water supplies takes many years, projecting future demands is required to determine which supplies and/or facilities need to be acquired. The planning demand level is measured in gallons per capita per day (GPCD) and is used along with projected population and projected large contractual use (LCU) needs to determine future demand levels; population projections will be discussed in detail in Section 2.4. The planning demand level is set higher than current use and current water conservation goals to account for uncertainties in water supply planning that might reduce the Utilities' water supply yield. The current Water Supply and Demand Management Policy set 150 GPCD as the planning demand level, which is the average of 2006-2011 water use.

Impacts of Climate Change

Climate change could significantly impact the reliability of the Utilities' supplies and/or the amount of water required to maintain existing landscapes. These changes may include reduced snow pack, earlier runoff, hotter and drier summers, and an increased recurrence of drought. A great deal of uncertainty exists related to current climate change projections along the Colorado Front Range and its impact on municipal water supply and demands. Current research indicates that changes in precipitation in this area are uncertain but that temperatures will increase and therefore it is likely that runoff will come

¹⁷ Water Supply and Demand Management Policy Report (dated April 2014; approved by City Council in later 2012).

earlier and in a shorter amount of time, precipitation may come more often as rain rather than snow, and higher temperatures will increase outdoor demands and change growing seasons for existing landscapes. For additional information refer to the CWCB 2014 report “Climate Change in Colorado: A Synthesis to Support Water Resources Management and Adaptation”.¹⁸

The Utilities’ water supply planning criteria and assumptions are conservative in part to account for climate change based on the information to date. The City will continue to monitor climate change information and, if necessary, will revise its water supply planning criteria and assumptions to ensure future water supply reliability.

1.3 SUPPLY-SIDE LIMITATIONS AND FUTURE NEEDS

Table 1.2 lists the future water supply needs and challenges. The full use of the Utilities’ water rights in a given year can be reduced by several physical and legal constraints. Legal challenges are related to Colorado water laws and the administration of water rights. Some of the agricultural water rights owned by the Utilities are not available for use because the shares need to be changed in Water Court to municipal use.

The Colorado Water Conservation Board’s Statewide Supply Initiative (SWSI) predicts a significant gap between water supplies and water demands along Colorado’s Front Range, starting in 2040 for the Northern region of the South Platter River Basin.¹⁹ Fort Collins is a forward-thinking community and the Utilities has identified water supply needed through 2065. Two key solutions to ensuring a reliable supply system moving forward include storage development and water efficiency programs. Water that is conserved may only be used for other beneficial purposes or at other times of the year if storage is available for that unused water.

Table 1.2 Water Supply Limitations and Future Need

Future Need/Challenge	Yes	No
System is in a designated critical water supply shortage area	X	
System experiences frequent water supply shortages and/or supply emergencies		X
System has substantial real or apparent water losses		X
Experiencing high rates of population and demand growth		X
Planning substantial improvements or additions	X	
Increases to wastewater system capacity anticipated		X
Need additional drought reserves	X	
Drinking water quality issues		X

¹⁸ <http://cwcb.state.co.us/environment/climate-change/Pages/main.aspx>

¹⁹ Camp Dresser & McKee Inc. 2011. Colorado’s Water Supply Future: Colorado Water Conservation Board 2010.

Storage Constraints

A primary physical constraint is the lack of storage capacity to manage and regulate the water rights owned by the City. Additional water storage capacity is critically needed to increase the yield and reliability of its water supply system. Operational storage is needed to meet return flow obligations inherent with converted irrigation shares and provide other operational flexibility, which has recently been met through the acquisition of Rigden Reservoir. Carryover storage is needed to capture water during wetter years for use during drier years and also provide a storage reserve for unexpected emergencies (e.g. a pipeline failure). Both types of storage are needed to increase the reliability and redundancy desired to meet the water needs of our customers.

While the Utilities do have some year-to-year “carryover” storage capacity, much of this is already allocated to meet return flow obligations and other contractual agreements. Northern Water does include some carryover storage in the CB-T system; however, it is also almost entirely allocated to meeting contractual obligations.²⁰ While the City owns shares of several ditch companies that do have storage, we do not have access to the storage systems. Acquiring storage in the Poudre Basin that meets the storage reserve would help diversify the City’s water supply system, which is currently highly reliant on C-BT storage.

Planned Storage Improvements

In 2003 the City acquired Halligan Reservoir, located on the North Fork of the Poudre River approximately 25 miles northwest of Fort Collins, for carryover and vulnerability storage. With plans for its expansion, the City is currently going through the National Environmental Policy Act (NEPA) permitting process, including an analysis of potential environmental impacts, other storage options, and costs and benefits. In 2013, the City acquired an existing gravel pit storage facility located below the Drake Water Reclamation Facility. The gravel pit, now Rigden Reservoir, has been enlarged to 1,900 acre feet and is being used for operational storage. The reservoir began operation in 2015 and will increase the system’s firm yield.

²⁰ Note that CB-T water is particularly valuable to the water supply portfolio because it can be stored within the C-BT reservoir system for use any time *within* a given water year.

2.0 PROFILE OF WATER DEMAND AND HISTORICAL DEMAND MANAGEMENT

The City of Fort Collins city limits do not perfectly coincide with the Utilities water service area. The information in Section 2.1 below describes the City of Fort Collins, rather than the service area, as the city limits are how this type of information is collected by the City Planning Department, the U.S. Census, and the American Community Survey. Information in Sections 2.2-2.4, however, will pertain to the Utilities' water service area.

2.1 DEMOGRAPHICS AND KEY CHARACTERISTICS OF THE SERVICE AREA

The City of Fort Collins is home to approximately 158,600 residents and 30,000 students as of 2015.²¹ The average household size is 2.37 people, the median age is about 29 years old, and about 27% of households have at least one person under the age of 18. The average household income is about \$72,000. As of the 2010 U.S. Census, about 55% of homes were owner-occupied, 57% of homes were single-family detached residences, and the median home value was \$247,800. About 11% of the housing stock is estimated to be built prior to 1960 and about 40% were built prior to 1980.²²

The City of Fort Collins is home to two major public higher education institutions: Colorado State University and Front Range Community College. Fort Collins was once home to a wide swath of agricultural activity; however, much of this is now limited to the outskirts of the City or has moved outside of the City entirely. Several high-tech industries call Fort Collins home, including Hewlett Packard, Intel, Woodward Inc., and AMD, among others. In addition to the other major employers like the City Government and the colleges, there has been an increase in the areas of clean energy, bioscience, and agri-tech businesses. The City also enjoys a strong microbrewery industry alongside an Anheuser-Busch Brewery.²³

2.2 HISTORICAL WATER DEMANDS

Up until the early 2000s, the Utilities' service area population growth was largely matched by an increase in total water demands. Like many other Colorado communities, the 2002-03 drought spurred the City of Fort Collins to rethink its water use. While the population continues to grow, water demands have exhibited a downward trend, as illustrated in Figure 2.1. From 2001 to 2014, the service area population increased by about 7% while the total treated water demand decreased by about 25%. Such reductions are a combined result of Utilities' customers being fully metered and adopting tiered/seasonal rate structures by 2003, as well as the robust water conservation program and the water conservation efforts by customers.

²¹ As of 2014, the Utilities' service area provided treated water to about 130,200 residents.

²² This paragraph contains information about the City of Fort Collins from three sources: the City Planning Department, the 2010 U.S. Census, and the 2013 American Community Survey.

²³ The Fort Collins AB Brewery is home to the world-famous Budweiser Clydesdales West Coast Team.

Treated water use and population, 1960 - 2014 Fort Collins Utilities

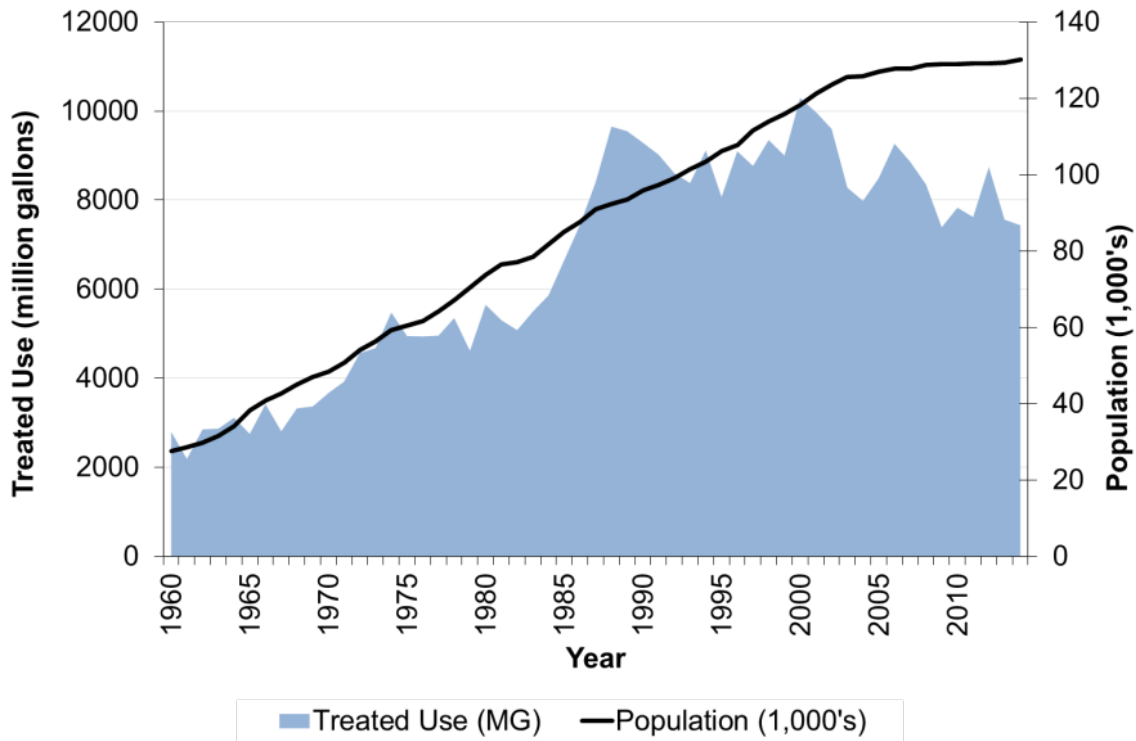


Figure 2.1 Treated water use and population

Daily water demand varies considerably throughout the year. Water use is fairly consistent throughout the winter months, then more than doubles in the summer months as customers increase use for landscapes and other seasonal purposes (e.g. pools). Figure 2.2 illustrates a five-year average of the daily treated water delivered from 2010-2014 along with details on the peak day for each year, which highlights how variable water demands can be in any given year.

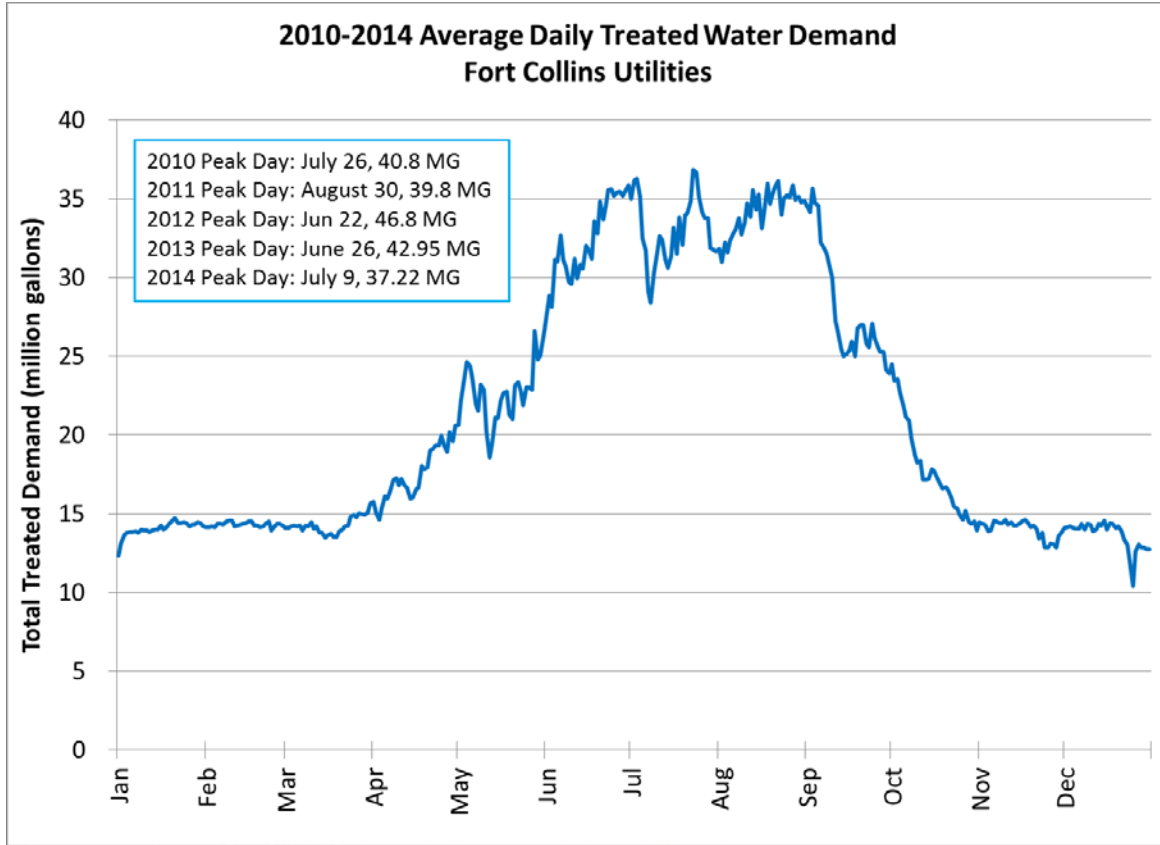


Figure 2.2 Average daily treated water demand

Fort Collins Utilities monitors treated water use by eight categories, as shown in Table 2.1. This table reports the annual use, number of accounts, average monthly use and water use by account, as of 2014. The majority of accounts are single-family residential accounts, however on a per account basis commercial customers use the most water. Recall that since the Utilities' water service area is different than the City limits; Outside City Customers refer to customers outside of the city limits but who are Utilities' customers. West Fort Collins Water District receives wholesale treated water from the Utilities, which is why they appear as one singular customer.

Table 2.1 Treated Water Use by Customer Category

Customer Category	2014			
	Annual Water Use (MG)*	Number of Accounts	Average Monthly Use (MG)*	Average Annual Use per Account (gal)*
Single-Family	2,142	26,930	178.5	79,536
Duplex	120	1,226	10	97,750
Multi-Family	970	2,240	80.8	432,934
Commercial	2,972	2,222	247.7	1,337,765
City Government	107	225	8.9	475,830
West Fort Collins WD	140	1	11.7	140,000,000
Outside City Customers	280	1,454	23.3	192,751
Total	6,731	34,298	560.9	196,251

*Note: These numbers are rounded and are not exact. MG = million gallons.

As shown in Figure 2.3, residential categories collectively use the most water each year: about 47% on average, with about 32% attributable to single-family homes. The City government buildings and facilities only use about 1% of the treated water each year, outside city customer use about 4% and the Utilities delivers about 2% of the treated water to West Fort Collins Water District. System loss is discussed in greater detail below.

Commercial customers use about 39% of treated water, on average. Beyond the small, mid and large commercial customers, the City has identified a number of Key Accounts, who are businesses that are typically the largest water and energy users. The Utilities' Customer Accounts representatives work together with the Key Account customers to connect them to the appropriate experts, programs and services they need from the City of Fort Collins. These partnerships help customers achieve their sustainability goals as well as the goals set by the Energy Policy, Water Efficiency Plan and Climate Action Plan. The Customer Accounts team offers a customized and targeted approach to assist in accomplishing the goals set by these policies. Given the uniqueness of how each business utilizes water, the largest users can also apply for a custom water conservation rebate, up to \$5,000, in addition to being encouraged to participate in our other rebate programs.

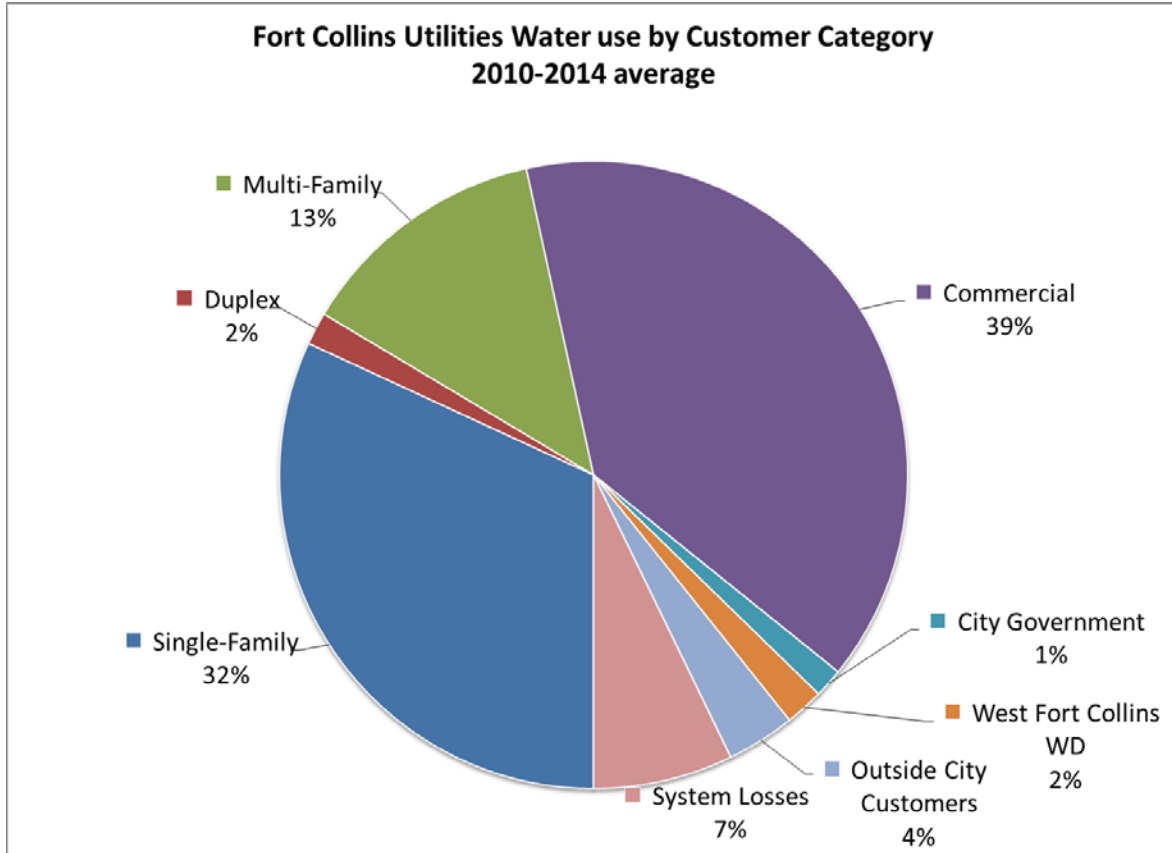


Figure 2.3 Water use by customer category, 2010-2014 average

2.2.1 GPCD: GALLONS CONSUMED PER PERSON PER DAY

Water consumption is often characterized by daily per person use, measured in gallons per capita per day (GPCD). This is calculated as total treated water use (total treated water that leaves the water treatment facility; includes all uses) divided by service area population and 365 days:

$$GPCD = \frac{\text{total treated demand} - LCU}{\text{service area population} * 365 \text{ days}}$$

These calculations exclude large contractual customers (LCU) and other sales or exchange arrangements to produce a value that is somewhat more comparable to other municipalities.²⁴

Fort Collins Utilities also estimates a weather-normalized GPCD metric in order to control for the fluctuations associated with varying weather patterns. This normalized GPCD is approximately the GPCD

²⁴ While the use of GPCD for comparisons has long been an industry standard practice, there is evidence that it is a difficult indicator for individual water-users to relate their behaviors to, and the system-wide GPCD is a function of far more than a utility’s water conservation and efficiency activities. More on this topic and recommended changes can be found in in Chapter 3.

that would have occurred if the weather conditions had been the average weather conditions for the region. This means that the actual GPCD is generally higher than the normalized GPCD when we have a relatively dry year and lower in a relatively wet year.

Demand levels have declined significantly over the last few decades, from around 230 GPCD in the early 1990s to about 200 GPCD before the drought year of 2002. Figure 2.4 shows actual GPCD and normalized GPCD from 2001 through 2014. To help illustrate the role that weather plays in our actual GPCD, the graph also includes annual precipitation and evapotranspiration for grass, both in inches.²⁵ In years where our region received less precipitation and the evapotranspiration rate was higher, actual per capita water use is higher. The average normalized use over 2002 to 2009 is 158 GPCD, approximately a 21% reduction in per capita water use from before 2002. The average normalized use from 2010 to 2014 is 146 GPCD, which is about a 27% reduction in per capita use from pre-2002. Since the 2002-03 drought, several factors have helped to reduce water use including, universal metering, conservation-oriented rate structures, more efficient plumbing standards, and our robust water efficiency and education programs.

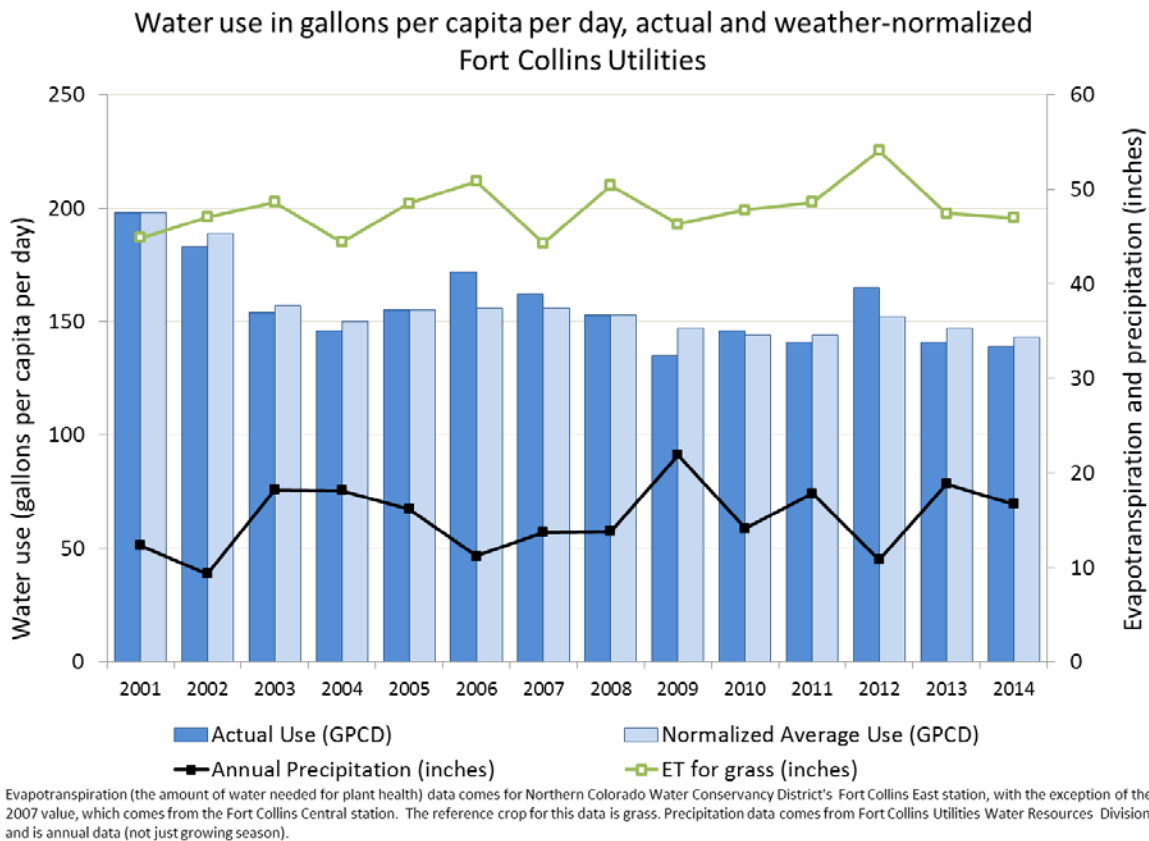
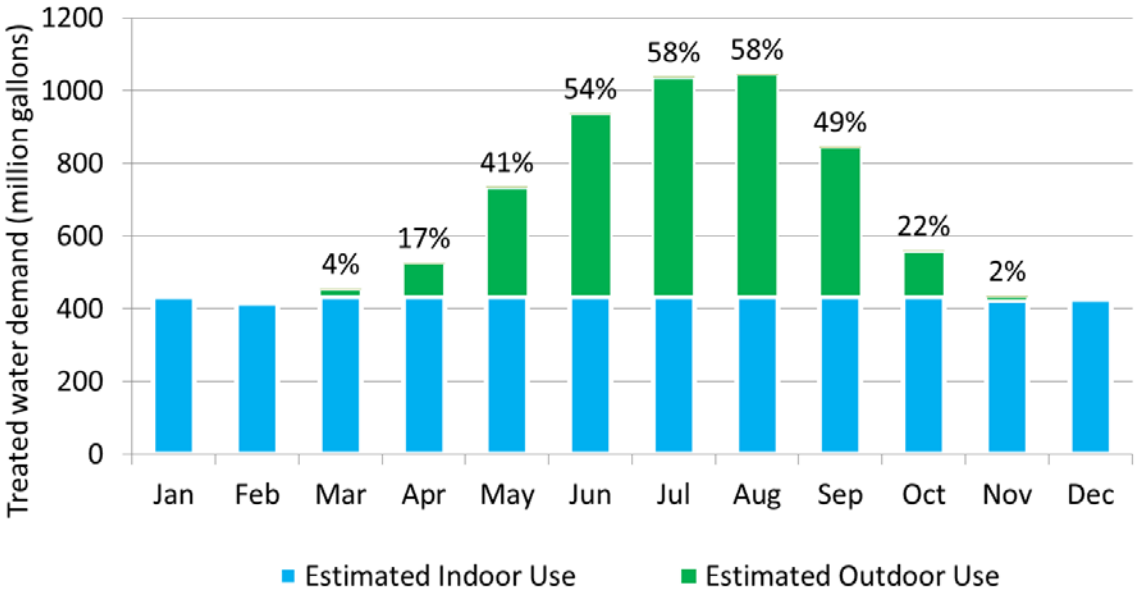


Figure 2.4 Water use in gallons per capita per day and weather data

²⁵ Evapotranspiration is often defined as the combination of the water lost (evaporate) to the atmosphere from the ground surface, evaporation from the capillary fringe of the groundwater table, along with the plant transpiration, which is evaporation of water from plant leaves. Evapotranspiration is affected by temperature, relative humidity, wind and air movement, soil moisture availability, and the type of plant. For more information see: <http://water.usgs.gov/edu/watercycleevapotranspiration.html>

Weather patterns mostly affect outdoor use of water. Figure 2.5 illustrates an estimate of the portion of water demand that is utilized outdoors. A common method for estimating indoor versus outdoor use is to take the average of the demands in December through February and set this to be the estimate of average indoor demands and assume that no outdoor use occurs in those months. Then for months March through October, attribute any use above and beyond this average indoor use to be the estimated outdoor use portion. As shown in Figure 2.5, water use in the summer months can be up to almost two-thirds of total water demands.

Estimated Indoor and Outdoor Use
2010-2014 average, Fort Collins Utilities



Note: Indoor use from March to October is estimated to be the average of the winter months (Winter Quarterly Average), December through February.

Figure 2.5 Estimated indoor and outdoor use, 2010-2014 average

Fort Collins Utilities participated in a single-family end use study in 2012.²⁶ This study helped shed some light on how families are using water, through a small 88-household survey and analysis. In terms of outdoor use, many of the participating homes were estimated to be under-watering, relative to what was water needs estimated based on landscape area and weather information. However a minority of homes were over-watering and this excess was large enough to offset any under-watering by the other participating households. This highlights our need to provide improved programs and education to help our customers use the optimal amount of water for their landscape.

Since indoor use is less visible to the Utilities, how people allocate and use water indoors is more of a mystery. This 2012 study illustrated that there are still a significant number of low efficiency toilets and

²⁶ Study was conducted by Aquacraft Water Engineering and Management, Inc.

clothes washers in the housing stock, however the majority of participating homes had a high efficiency shower heads. The study also estimated that a significant amount of water is lost to leaks, which often go unnoticed by the residents. This highlights the need to utilize data available through the Advanced Meter Fort Collins (AMFC) program to help identify leaks and let our customers know so that they can address the problem and stop paying for lost water; we are piloting a Continuous Consumption program to meet this need, discussed further in Section 2.3.

As noted in Section 1.1, in addition to treated water the Utilities diverts about 3,000 to 4,000 acre-feet of raw water to irrigate City parks, golf courses, a cemetery, greenbelt areas, some school grounds, and for the purposes of meeting some contractual raw water delivery obligations.

2.2.2 SYSTEM WATER LOSS

Water losses in the Fort Collins Utilities' water system can occur in several locations:

- Between the points of diversion and the water treatment facility (e.g., from conveyance losses within the pipelines carrying water to the treatment facility)
- Within the water treatment facility (e.g., during filter backwash processes)
- Within the water distribution system between the water treatment facility and the meters of end users (e.g., from conveyance losses in the distribution pipe network)

Losses within the conveyance system that brings water to the treatment plant and within the water treatment plant itself are not fully quantified, but estimated at 3% of the annual diverted volume, when estimated from source to outlet of the treatment plant. Losses within the distribution system are estimated based on the difference between the amount of water treated at the treatment plant and the cumulative amount of water metered at end users. A summary of losses is provided in Table 2.2 below. These numbers represent estimates only and may reflect a number of factors. Fort Collins Utilities is currently exploring integration of the American Water Works Association's M36 methodology into its water loss management and tracking.

Table 2.2 System Water Loss Estimates

Loss Estimate (in Million Gallons)	2010	2011	2012	2013	2014
Treatment and Diversion to Treatment Conveyance Losses	242.2	235.7	270.8	233.8	230.0
Distribution Losses	426.5	462.1	695.1	534.9	705.7
Total	668.7	697.8	965.9	768.8	935.7
Distribution loss as percentage of total treated water	5.4%	6.1%	7.9%	7.1%	9.5%

2.3 PAST AND CURRENT DEMAND MANAGEMENT ACTIVITIES

Faced with a drought in 1977, the Utilities created a part-time water conservation position. In 1989 the position expanded to a full-time position. The first Water Demand Management Policy in 1992 led to an expansion of conservation projects and increased educational and outreach efforts. The 1992 Policy set a conservation goal of 195 GPCD by the year 2020.

Prompted by the drought of 2002-03, Utilities made several efforts in 2003 to increase accountability and encourage the efficient use of water including fully metering every customer by, implementing a conservation-oriented rate structure – a tiered rate structure – with a seasonal component, initiating several new outreach and educational programs, and also developing the Utilities' first Water Supply Shortage Response Plan as guidance during drought and other emergency conditions.²⁷ The first joint Water Supply and Demand Management Policy was developed in 2003 and set a conservation goal of 185 GPCD by 2010.

The Utilities' Water Conservation program expanded again in 2010 with the development of a formal Water Conservation Plan. This plan set the current conservation goal of 140 GPCD by 2020. City Council approved the budget for additional programs and staff outlined in the plan starting with the 2010-2011 budgets. The plan was approved by the Colorado Water Conservation Board in early 2010. Note that conservation goals are purposely set lower than the Planning Demand Level discussed in Section 1.2, which is used for supply reliability planning.

2.3.1 CURRENT DEMAND MANAGEMENT ACTIVITIES

Table 2.3 is a list of the current demand management activities along with the initial year of implementation, if known. Note that many of our activities, programs, and regulations have substantially evolved over the years. For a description of each activity, see Appendix B, which also contains a table with participation levels from 2010 to 2014 for most of our current activities. This table does not contain participation counts for events.

²⁷ The Water Supply Shortage Response Plan contains certain restrictions on the use of City-treated water and other actions to be taken during a specified drought or water supply conditions.

Table 2.3 List of Current Water Conservation Activities

Foundational Activities	Educational Activities
Conservation-oriented rate structures (2003)	Business education programs (2004)
Continuous consumption program (2015)	Community education programs (1977)
Metering (2003)	Conservation kit giveaways (1990)
Monitor My Use (2014)	Conservation public information efforts (1977)
Online water use calculator (2012)	Home water reports (2014)
Seasonal rate structures (2003)	Hotel and restaurant conservation materials (2003)
Utility water loss program (1993)	K-12 education programs (1997)
Target Technical Assistance and Incentives	Watershed tours (2012)
Clothes washer rebates (2003)	Xeriscape Demonstration Garden (1986)
Commercial facility assessments (2004)	Ordinances and Regulations
Custom commercial rebates (2011)	Green building codes (2011)
Dishwasher rebates (2007)	Landscape and irrigation standards (1994)
Home efficiency audits (2009)	Parkway landscaping regulations (2013)
Home efficiency loans/ZILCH/on-bill financing (2010)	Plumbing standards (1978)
Irrigation equipment rebates	Restrictive covenants ordinance (2003)
Low income retrofit program (2007, w/ LCCC)	Soil amendment ordinance (2003)
Restaurant pre-rinse spray valve distribution (2011)	Wasting water ordinance (1917)
Showerhead rebates (2011)	Water efficiency upgrades at City buildings (2010)
Sprinkler system audits (1999)	Water supply and shortage response plan (2003)
Toilet/Urinal rebates (2010)	Other Activities
Xeriscape design/incentive program (2010)	Raw water for City irrigation, large customer reuse project (1985), backwash water recycling (2003)

2.4 DEMAND FORECASTS

Acquiring water supplies takes many years. In order to ensure a reliable water supply for customers in the future, the Utilities plan for future growth and water needs. The City's future municipal water demands are largely dependent on population growth and the rate of commercial and industrial development. The rate and pattern of population growth are also influenced by the future economy, land use policies, and development incentives, among other factors. As such, the Water Supply and Demand Management Policy Report (dated April 2014) takes the long view and identifies projected demands through 2050.

2.4.1 PLANNING HORIZON

The current Water Conservation Plan, developed in 2009, identified a 10-year planning horizon with a goal to update the plan in five years. This Water Efficiency Plan, to be submitted to the Colorado Water Conservation Board in 2017, takes the middle road and uses a 2030 planning horizon, with incremental goals leading up to the 2030 goal, as well as a goal to develop an updated plan no later than 2024 (seven years after this Plan's required submission year).

2.4.2 DEMAND PROJECTIONS

The Utilities estimates future water demands for a given year by first multiplying the projected population by the planning demand level (150 gallons per capita per day) multiplied by the number of calendar days, then projected large contractual use (LCU) is added to get the total projected water demand, as shown in the equation below. The Demand Planning Level is currently set at 150 gallons per capita per day, and is purposely set higher than conservation goals to provide a greater level of system reliability²⁸.

$$\text{Total Demand} = \text{Projected Population} \times 150 \text{ gpcd} \times 365 \text{ days} + \text{Projected LCU}$$

2.4.3 POPULATION PROJECTIONS

Given the differences between the Fort Collins Utilities water service area, the Fort Collins city limits, and the Fort Collins Growth Management Area, population projections were estimated using information from a Traffic Analysis Zone (TAZ) study developed for the City of Fort Collins and Larimer County. The TAZ information is based on City and County zoning designations, which dictate the type of development and thus population densities. The TAZ study makes population estimates based on projected new development and redevelopment in each zone. The population projections for this Plan were estimated by using the zones within the water service area. Note that, based on the TAZ study, it is anticipated that the Fort Collins Utilities' water service area will reach build-out near 2040, meaning that all vacant buildable land will be developed. After build-out, it is assumed that the water service area population will only grow via redevelopment, and therefore population growth in the service area is expected to eventually slow down. However, the Utilities currently has agreements to supply water to surrounding water districts. With these agreements in place and the potential for more in the future, the Utilities considers these possibilities in estimating future demand projections. Thus, the population projections used in this plan includes some of West Fort Collins Water District.²⁹

²⁸ For more information on the Planning Demand Level, see Section 1.2.

²⁹ The estimates do not include some Fort Collins-Loveland Water District areas currently served by the Utility because these areas are served only in the sense that a) FCLWD purchases some excess capacity in our Water Treatment Facility, and b) there is an now terminated agreement whereby certain areas of development could meet raw water requirements either through the Utilities or the districts. If any of these areas are annexed by the City, then they would still have the option to make use of this option.

2.4.4 LARGE CONTRACTUAL USE

In addition to population-based water demands, the Utilities also has contractual obligations to provide water for the current and future demands of several large industrial water users. Large contractual use (LCU) is estimated separately from population-based water demand projections and is not included in the GPCD metric. The LCU projections are added to the overall projected demands, which are based on population projections and the water demand planning level set in the Water Supply and Demand Management Policy Report (dated April 2014). LCU is currently about 3,900 acre-feet per year of treated water. Additional raw water is provided to LCUs. Because of certain applications, a portion of the water supplied to LCUs must be sourced from reusable water rights. The future LCU is estimated to be about 8,000 acre-feet per year by 2050. This will require a mix of single use and reusable water sources.

Figure 2.6 illustrates the projected population for the water service area. This figure also illustrates the project water demands based on the historic Planning Demand Level and the current Planning Demand Level.³⁰ It is clear that conservation and efficiency activities, among other factors, have helped to reduce total water use as well as per capita water use; these reductions have lowered the planning demand level and helped to increase the reliability of the water supply system.

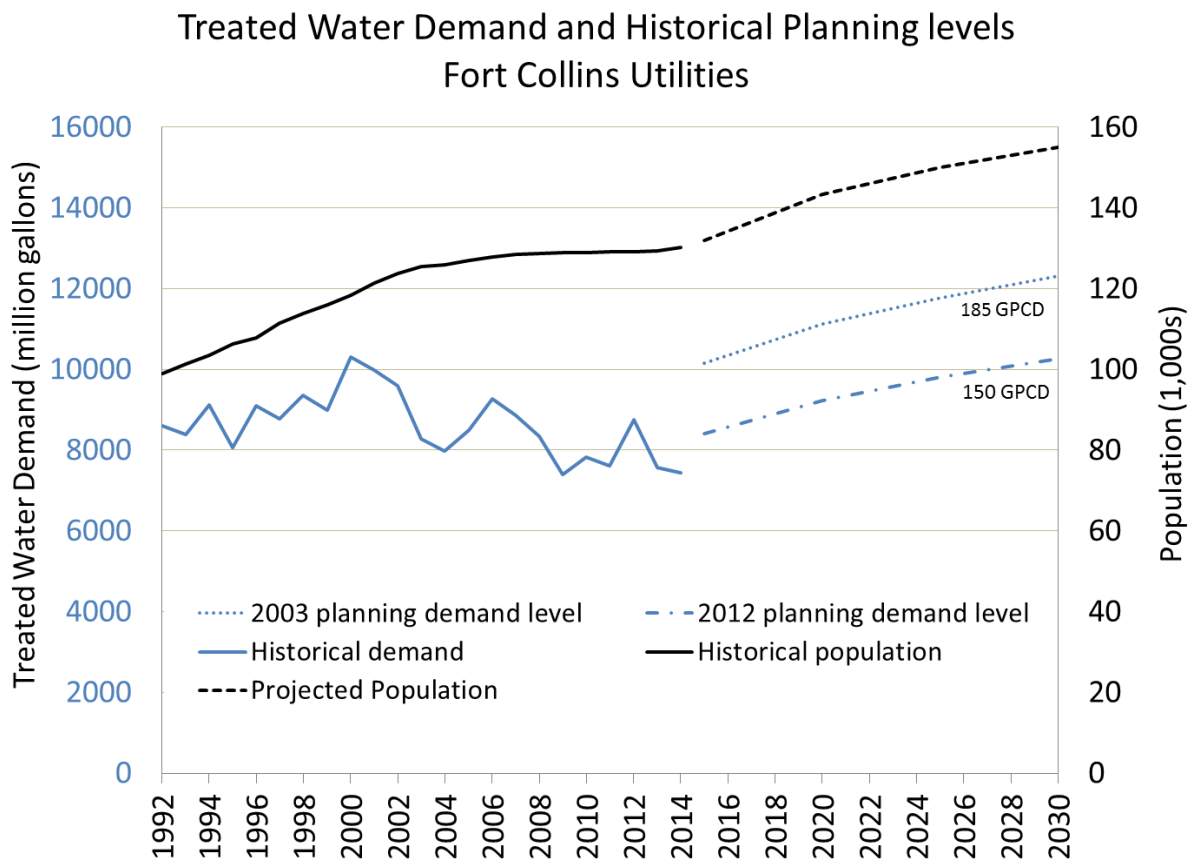


Figure 2.6 Treated water demand, historical planning levels, and population

³⁰ These estimates also incorporates an estimated 8% system water loss level.

3.0 INTEGRATED WATER SUPPLY AND DEMAND MANAGEMENT PLANNING

There are four main documents that provide direction and/or complement the Utilities' water efficiency efforts, listed below. Along with the most recent Water Conservation Plan of 2010, these documents helped to develop this updated Water Efficiency Plan and will also guide our ultimate implementation moving forward.

- The City of Fort Collins Strategic Plan (2015-16)³¹: this document is a result of a planning process incorporating input from citizens, businesses, City Council, and City staff. It identifies the City's seven key outcome areas as well as several strategic objectives in each area; these are to guide the work in all City service areas. Water efficiency aligns very strongly with Objectives 4.8, 4.7 and 4.6, it also touches on several other objectives detailed in Appendix C.
- The Water Supply and Demand Management Policy (2012)³²: this is the guiding document for water supply and demand management activities. The objective is to provide a sustainable and integrated approach to 1) ensuring an adequate, safe, and reliable supply of water for the beneficial use by customers and the community, and 2) managing the level of demand and the efficient use of a scarce and valuable resource consistent with the preference of Water Utility customers and in recognition of the region's semi-arid climate. The original water supply-focused policy was developed and approved in 1988; it was updated in 2003 and again in 2012, with the most up-to-date report published in 2014. This Policy defers to the latest Water Efficiency Plan to set the efficiency goals.
- 2015 Climate Action Plan Framework: The CAP provides a high level framework to set Fort Collins on the path to achieve carbon emissions reduction objectives as requested by Council, but will not determine future implementation details. Implementation details will be developed as strategies and tactics are considered on a case-by-case basis, and will be brought forward to Council for approval prior to implementation. The two main strategic initiatives that involve water are: 1) Water and Land Use, and 2) Preparation, Adaptation, and Resilience.
- The Water Supply Shortage Response Plan (2014)³³: this document identifies the restrictions and requirements intended to achieve progressively higher levels of water savings under various projected water shortage conditions. The original plan was approved by City Council in 2003 and an update was approved in 2014.

³¹ The City's Strategic Plan can be found at: <http://www.fcgov.com/citymanager/pdf/strategic-plan-2015.pdf>

³² Though a more extensive report was developed and dated April 2014. See the City's Water Supply and Demand page: <http://www.fcgov.com/utilities/what-we-do/water/water-supply-demand>

³³ http://www.fcgov.com/utilities/img/site_specific/uploads/ORDINANCE_NUMBER_088_July_2014_Water_Supply_Shortage_Response_Plan.pdf

3.1 WATER EFFICIENCY AND WATER SUPPLY PLANNING

In planning for a reliable, secure, and sustainable water future, the Utilities employs an integrated resource planning strategy that utilizes a portfolio-based approach to meeting future demands and is guided by the documents described in Section 3.0 above. In most years, the City of Fort Collins Utilities has the benefit of having a plentiful level of water supplies that ensure sufficient supplies above the reliability criteria discussed in Section 1.2. The Utilities' water supplies are expected to support projected changes to demand under a combined strategy of a) increased long-term storage and, b) continued water efficiency efforts. This diversified approach will reduce water demand, improve system reliability, and enhance community resilience to drought and climate change. These two strategies need to be undertaken collectively; either on their own will be significantly less effective without the other.

Expanded water efficiency measures are cost-effective means to water supplies that can be utilized for several beneficial purposes. Conserved water can be stored for periods of drought, leased for agriculture, and used for beneficial environmental enhancement efforts such as in-stream flow programs. Increased storage provides a physical location for conserved water and enables Fort Collins to take full advantage of savings achieved by customers. See Section 1.3 for more information on the role of storage in our supply and demand management planning.

3.1.1 BENEFITS OF WATER EFFICIENCY

In addition to being a key part of the integrated resource management process, water efficiency programs also:

Foster a conservation ethic and reduce waste: the success of this Plan depends on the cooperation and support of the Water Utility customers and the City of Fort Collins community. Instilling a conservation ethic is an important foundation to changing habits and attitudes toward water use. The power of the individual in conservation makes a big difference in protecting quality of life, including our environment today and for generations to come. Our average use, calculated as gallons per capita per day (GPCD), has declined significantly. For example, in 2001 the GPCD was 198, whereas in 2014 it was 143. Several conservation-based efforts took place on the heels of the 2002-03 drought which have helped to support a sustained reduction in use; these include full metering, conservation-oriented rate structures, seasonal rate structures, expanded targeted industry outreach, the restrictive covenants ordinance, conservation kit giveaways, clothes washer rebates, and more.

Demonstrate a commitment to sustainability: The City aims to be leaders in this effort. The City approved the Climate Action Plan Framework in 2015 and previously approved an Action Plan for Sustainability in 2004, and an Environmental Policy in 2009 that outline the ways the City itself will reduce its environmental impact (this includes a commitment to identifying and implementing effective ways to conserve natural resources). To bring the global concept of sustainability to action at the local level, sustainability advocates use the triple bottom line in decision-making. Essentially, that means projects are evaluated based on their social, economic and environmental impacts. Rather than make decisions on the basis of profit or the economic bottom line, three bottom lines (social, economic, and environmental) are considered. For the City, it means creating an optimal mix of resource efficiency, cost effectiveness and employee well-being in daily City operations. One example of a goal is to reduce municipal operations water irrigation and increase efficiency per acre, as well as to reduce indoor use by

20% by 2020.³⁴ City buildings are required to achieve LEED “Gold” certification. Also, several areas of City grounds have been renovated with low water using landscape materials and some weather sensors have been added to the irrigation systems. The City Parks system is regularly audited; the majority of the Parks irrigation systems uses 95% or less of the water needed, based on the turf and plant requirements.

Provide water for multiple beneficial purposes: Conservation efforts can help to provide more water for beneficial uses beyond normal municipal purposes. For example, the area around Fort Collins continues to be a productive agricultural area, which in addition to representing economic activity, also provide significant open space outside of Fort Collins that is desired by many residents. When possible, making some of the City’s surplus water available for these purposes provides supplemental revenue for the Utility and its customers. The potential environmental benefits of conserved water are also important. These include providing additional flow for the local stream systems, in-stream flow programs, improvements in water quality, improvements in aquatic and riparian ecosystems, enhanced recreational opportunities, and aesthetics, among other benefits.

Enhance resilience during drought periods: Conservation and efficiency efforts can help to develop a community and landscape that is more resilient to drought conditions. Through support of drought planning and implementation of proactive mitigation efforts, the actions proposed in this Plan can help to reduce vulnerability, protect economic health, and ease the effect of drought on individuals, businesses, and landscapes.

Prepare for climate change: Climate change may have significant impacts on both water demands and water supplies in the time frame of this plan. It is anticipated that climate change in the Mountain West will likely include the following changes: Increased evapotranspiration rates, increasing the water required to maintain the landscaping; more frequent dry spells and a longer growing season; increased variability in seasonal snow pack; earlier spring snowmelt and runoff; changes in the distribution of precipitation throughout a given year. These changes are expected to accelerate over the decades ahead and impacts may depend largely on factors such as population growth, economic growth and technological changes. Utilities will likely face significant challenges in the years ahead managing both water demands and water supplies. With many uncertainties regarding both water supply and demand, it is prudent to prepare for a wide range of conditions in the future. One example of the importance of efficiency efforts is that without conservation and/or significant changes in landscaping choices, outdoor water use will likely increase over the coming decades as customers strive to maintain their landscapes in a hotter and longer growing season. Furthermore, an approach that also includes planning for adequate reservoir capacity to help balance the swing in supplies available between wet and dry periods

³⁴ <http://www.fcgov.com/sustainability/goals.php>

Reduce costs:

- Direct utility costs: Efficiency programs decrease water and wastewater treatment costs as it reduces the amount of chemicals and energy used to produce, deliver, and heat water.
- Customer costs: water bill, but also the cost of energy to heat water, and landscape related costs including the cost to maintain, like labor costs, fertilizer and other landscape-related product costs.³⁵
- Long-term costs: decisions about water supplies, treatment/distribution capacity needs, storage facilities are all made in consideration of projected water demand and peak capacity.

In addition to these savings, Fort Collins Utilities has benefited financially from conservation in two notable ways:

- Halligan Water Supply Storage project size: The original Halligan Reservoir enlargement planned allotment for Fort Collins was 12,000 acre-feet, which was in part based on the 2003 planning demand level of 185 GPCD. Among other factors considered in the permitting process, the role of conservation and the downward trend in GPCD (current planning demand level = 150 GPCD) resulted in revising the enlargement downward to only 8,125 acre-feet, which is approximately a 68% reduction and represents a \$6.1M savings in project costs.
- Extra Water Treatment Facility capacity: A Water Treatment Facility (WTF) is designed for peak demand. The Fort Collins WTF was last expanded in 1999, prior to the significant increase in conservation efforts prompted by the 2002-03 drought. The total WTF treatment capacity of 87 MGD is estimated to be *at least* 23% larger than the expected build out in 2035 peak demand (~ 20 MGD). In 2013, the City of Fort Collins Utilities entered into an agreement with Fort Collins-Loveland Water District to sell FCLWD up to 5 million gallons per day (MGD) in excess water treatment capacity. The financial benefits of this agreement include the associated plant investment fee of \$12.6M and a treatment charge of about \$2 per thousand gallons.³⁶
- Delay of capital expansion projects: Decreased wastewater flows have delayed the expansions of the Drake Water Reclamation Facility treatment capacity from 2010 to 2028.

³⁵ These costs may also represent larger environmental costs as run-off from landscapes can affect water quality and ecosystem health.

³⁶ In addition to the benefits to the City of Fort Collins Utilities, Fort Collins-Loveland Water District will be able to defer expansion of their current treatment facility and/or construction of a new water treatment facility. Additional information on this agreement can be found in the City of Fort Collins City Council agenda and materials from the October 1st, 2013 regular City Council meeting.

3.2 WATER EFFICIENCY GOALS

The WEP's overarching goal, which tracks from previous goals, is to reduce water demand to 130 GPCD by 2030. During the development of this updated Plan, however, it became clear that a single, system-wide metric of water use doesn't resonate with and isn't meaningful for customers. During the public comment period Water Conservation staff often saw that the GPCD metric was confusing. For example, it was unclear which water uses (residential, commercial, the Utilities' largest users, etc.) were involved in its calculation. The exact definition/equation of a utility's GPCD is a common issue for other entities and therefore can complicate and limit the ability to compare across utilities. Furthermore, a system-wide GPCD isn't a direct measure of the progress and effectiveness of the Water Conservation team's activities.

It was also unclear how an individual's water use (as seen on their bill) related to a GPCD goal. For most residential customers, on average, their individual GPCD or even GPHD (gallons per household per day) are much lower than the system-wide GPCD; however, during the summer irrigation months, it may be significantly higher. For customers in multi-family or multi-business units that are not sub-metered, there is no way to connect to the single system-wide goal. The community's feedback raised the question of the appropriateness of a GPCD goal, as well as the question of the best way to structure goals to motivate lasting change and communicate water efficiency progress.

Amy Vickers & Associates, Mary Wyatt Tiger and Shadi Eskaf confirm these broad issues: "...estimates of [GPCD] are not comparable to each other when the types of data used to compute GPCD differ. While average single-family water use metrics reflect a relatively small number of types of indoor and outdoor end uses of water that are common to most single-family homes, an average water use metric for an entire city reflects thousands of different types of water-using activities [...] Furthermore, a system-wide average neglects the nuances of individual customer behavior and is not specific enough to detect some significant changes in water use behavior." in the 2013 American Water Works Association report: *A Guide to Customer Water-Use Indicators for Conservation and Financial Planning*.

For this WEP, a long-term goal of 130 gpcd by 2030 will remain. GPCD is still an industry standard and still a means to compare progress over time for the Fort Collins Utilities system overall. In the coming years, staff will work to evolve the metrics and indicators by which we judge water conservation/efficiency progress. The ultimate version of the goal definitions and structure will be subject to analysis and research and will be reflected in the next update of the Utilities' Water Efficiency Plan. Currently, staff recommends moving toward measurement and tracking of:

- Volume of water saved. This will be evaluated based on tracking conservation and efficiency programs. This is being added in part because City and Utility leadership have asked for clearer metrics related to Water Conservation programs. This metric provides good clarity and is a more direct measurement of the impact of Water Conservation programs.
- Program participation. This will be tracked by programs and events. This will give a measure of how many customers we're reaching.
- Residential water use indicators defined using measures of the amount of water delivered to residential customers and the service area population. This will likely be further broken down by type of residence (single-family, duplex, multi-family).
- Commercial sector indicators. These indicators will be based on industry-specific standards and set in partnership with the local commercial sector.

An updated Water Efficiency Plan will be developed no later than 2024 (7 years from the anticipated CWCB 2017 submission date). Figure 3.1 illustrates the projected water demand level if the 130 GPCD by 2030 goal is met, the current 140 GPCD by 2020 goal in the 2010 Water Conservation Plan, and the current 150 GPCD Planning Demand Level used in water supply reliability planning, along with historical and projected population. Figure 3.2 is a graph of GPCD levels, rather than total volume. This figure shows the historical GPCD levels along with our goal level and the projected trend in use that will achieve that goal. Chapter 4 describes the strategies for achieving this goal. Chapter 4 describes the strategies for achieving this goal.

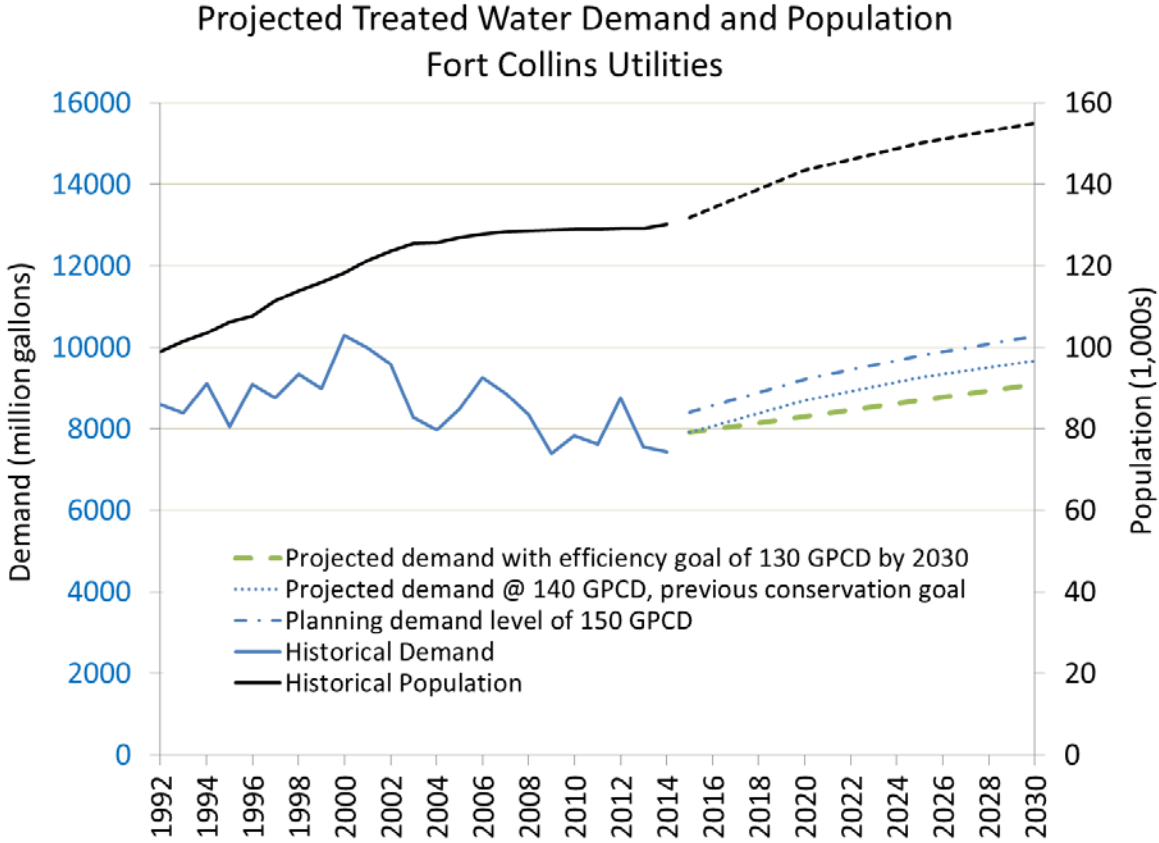


Figure 3.1 Water efficiency goal, demand and population

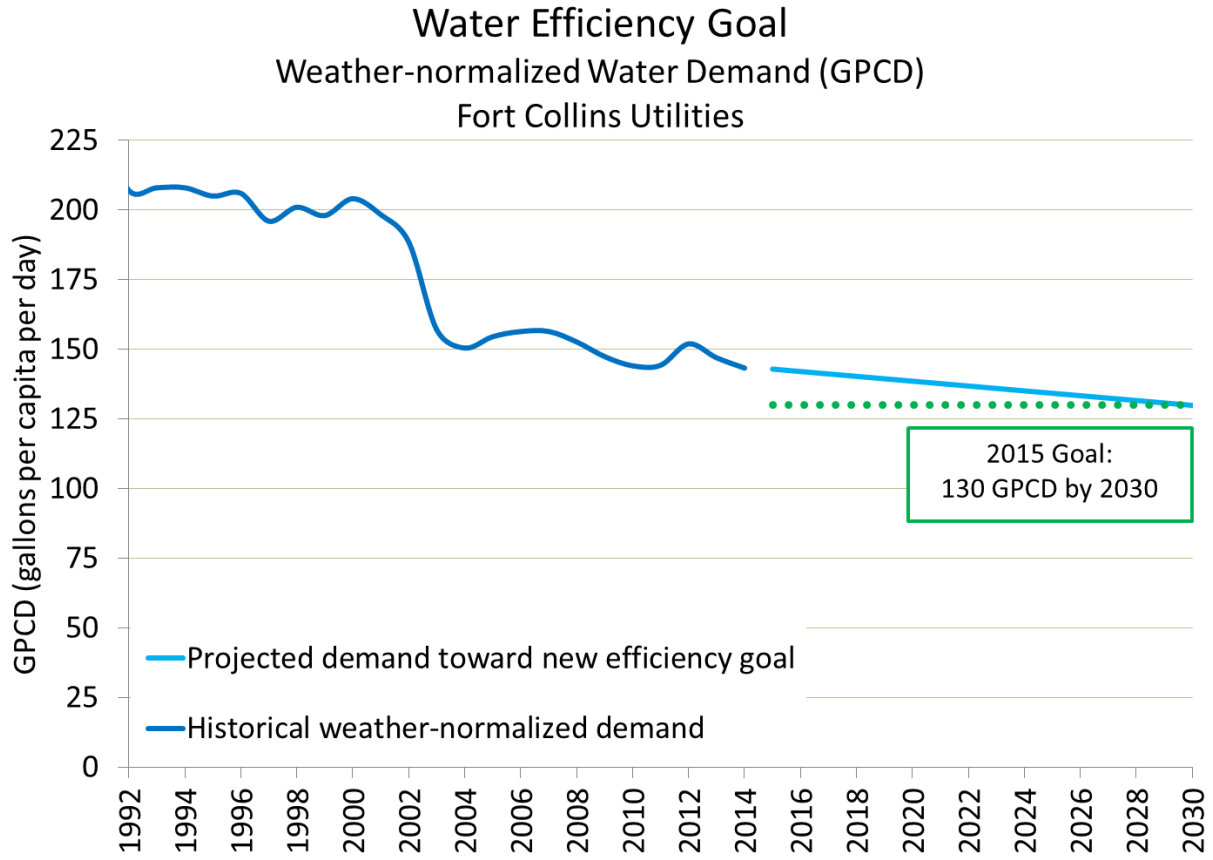


Figure 3.2 Historical GPCD and New Efficiency Goal

4.0 SELECTION OF WATER EFFICIENCY ACTIVITIES

The Utilities Water Conservation Team uses its mission and three overarching objectives to select the programs, projects, and approaches used in our daily efforts. These will ultimately guide our path to achieving our water efficiency goal of 130 GPCD by 2030 and align our work and efforts with those of the Utilities, the City and the State.

Water Conservation Team Mission: Cultivate a water efficient, adaptive, and knowledgeable customer base through education and cost-effective water efficiency programs while supporting the City's strategic plan and its social, environmental, and economic health.

Water Conservation Team Objectives:

- Water Efficiency and Conservation – provide water for beneficial purposes while reducing unnecessary use and waste.
- Customer Service – provide exceptional service for an exceptional community
- Technical Support – provide technical expertise to customers and City staff

4.1 SUMMARY OF SELECTION PROCESS

4.1.1 SELECTION PROCESS AND CRITERIA

Fort Collins has a robust water conservation approach with a number of conservation activities that have been implemented for years. We intend to continue the water efficiency activities, in some form, within our current portfolio of programs. These programs are likely to evolve over the years and the exact specifics of each are subject to change as a result of changing legislation, regulations, technology, customer preferences, appliance/fixture saturation rate, and Utilities/City plans. For example, the state of Colorado has passed legislation (Senate Bill 14-103) that mandates that any plumbing fixture sold in the state must meet WaterSense standards by September 2016; this includes lavatory faucets, toilets, urinals, and showerheads. This change will likely affect our current approach to incentivizing customers to swap out old efficient fixtures for new, efficient ones.

In addition to a review of our existing activities, new and innovative activities were researched. Potential activities were identified from a number of sources including the Colorado Water Conservation Board's technical resources, the Colorado WaterWise Guidebook of Best Practices for Municipal Water Conservation in Colorado³⁷, a broad literature review, exploration of other utility case studies, and input from Utility staff, the City of Fort Collins Water Board, the community, the Water Conservation staff, and a Water Efficiency Plan Technical Advisory Group, consisting of several City departments as well as community members. This process not only identified activities, but also processes and tools that have the potential to help improve all activities.

The activities identified in this plan represent the best choices at the time. Technology, regulations, efficiency standards, market saturation, customer preferences and other factors are likely to change before this plan is updated and are sure to change during the course of the planning horizon (2030). We will continue to monitor the effectiveness and appropriateness of current activities while also exploring

³⁷ <http://cwcb.state.co.us/technical-resources/best-management-practices/Pages/main.aspx>

new programs. The City of Fort Collins utilizes a two-year budgeting cycle called Budgeting for Outcomes, which determines funding for Water Efficiency activities by, in part, evaluating the proposed activities against the City's strategic outcomes. We are therefore potentially constrained in terms of the activities we can undertake; the funding must be available and approved by City Council.

4.1.2 PRIORITIZATION PROCESS

Each of the potential activities will be prioritized using the following qualitative screening criteria.

- Program Effectiveness: This combines the estimated water savings with the estimated program costs: How effective is the activities in terms of gallons of water saved per program dollar spent?
- Staff Resources: How labor- and time-intensive is the program? Do we have the staff resources to properly support, monitor and evaluate the program?
- Customer Preferences: Does this activity meet the needs and wants of the Utility water service area customers? Does this activity support the social and economic health of our customers?
- Participation Level and Reach: How many customers could be impacted by this program? What types of customers does it reach? Is it engaging previously unengaged customers?
- Alignment with other Utility and City objectives: Does this program support activities in other areas of the Utility and the City? Does it help achieve Utility and City strategic objectives?

4.1.3 POTENTIAL NEW DEMAND MANAGEMENT ACTIVITIES

In addition to continuing the existing set of water conservation and efficiency activities listed in Section 2.3 and described in greater detail in Appendix B, we identified five areas of opportunity for developing new programs and approaches. Each highlights an area with great potential to expand and increase water efficiency and great potential to better meet the needs of our customers. Each of these areas also supports specific strategic outcomes and objectives in the City's Strategic Plan; these are listed in Appendix C. In this process we also identified three implementation principles that will guide the development of any new programs and strategies; these are detailed in Section 5.1.

Areas of Opportunity

- Leverage Advanced Meter Fort Collins data and capabilities
- Promote and support greater outdoor water efficiency
- Encourage greater integration of water efficiency into land use planning and building codes
- Expand commercial and industrial sector strategies
- Increase community water literacy

Table 4.1 highlights a few benefits of each identified area, a few potential activities that fall into each area, as well as a brief description of an existing practice within the area.

Table 4.1 Areas of Opportunity

Leverage Advanced Meter Fort Collins data and capabilities		
Aligns with City Plan Strategic Objectives: 3.9, 4.6, 4.7, 4.8, 7.9, 7.10		
<p>Benefits</p> <ul style="list-style-type: none"> • Increased customer understanding of water use • Greater connectivity to customers • Increased customer benefits through web portal information and tools • Less confusion and fewer bill surprises 	<p>Potential Activities</p> <ul style="list-style-type: none"> • Monitor My Use & High Bill/Use Alerts • Improved leak detection • Near real-time identification of savings and inefficiencies • Craft easy-to-understand, targeted water-savings actions based on data and use patterns 	<p>Example: The continuous consumption uses AMI data to detect likely leaks; we alert homeowners so that they can fix the leak and avoid damage and high bills. In 2015 we reached out to 980 customers.</p>
Promote and support greater outdoor water efficiency		
Aligns with City Plan Strategic Objectives: 1.11, 4.6, 4.7, 4.8, 7.5		
<p>Benefits</p> <ul style="list-style-type: none"> • Reduced peak season and peak day demands, which impact system capacity needs and long-term planning • Customer benefits through lower bills, increased aesthetics and home value • Fewer wasting water issues/complaints 	<p>Potential Activities</p> <ul style="list-style-type: none"> • Residential and Commercial sprinkler audit programs • Xeriscape Incentive Program • Customer and Contractor training series • Interactive demonstrations • Educational Water budget tool 	<p>Example: In 2014 we provided over 400 sprinkler system audits, with an estimated potential savings of 30MG. The cost-effectiveness of this program is about \$1.20 per 1,000 gallons saved.</p>
Encourage greater integration of water efficiency into land use planning and building codes		
Aligns with City Plan Strategic Objectives: 1.3, 1.11, 3.7, 4.7, 4.8		
<p>Benefits</p> <ul style="list-style-type: none"> • Increased efficiency of development • New development will lead by example • Less waste from pursuing retrofits of new development • Reduced impact of population growth 	<p>Example Activities</p> <ul style="list-style-type: none"> • Landscape requirements and incentives for new development • Contractor education and trainings • New and re-development plan review requirements • Require WaterSense appliances and fixtures 	<p>Example: Beginning in 2012, the City's Green Building Code mandates WaterSense toilets and other fixtures in residential and commercial facilities; this is estimated to save between 20-25% annually.</p>

Expand commercial and industrial sector strategies		
Aligns with City Plan Strategic Objectives: 3.5, 3.6, 4.7, 4.8, 5.10		
Benefits <ul style="list-style-type: none"> Increased water savings due to scale of projects Enhanced business partnerships Support ClimateWise program Enable greater economic health 	Example Activities <ul style="list-style-type: none"> Custom commercial rebate program Benchmarking Targeted industry-specific campaigns and outreach Address tenant/owner incentive misalignment 	Example: In 2013 the custom commercial program helped replace two pools filters, which are estimated to have nearly 800,000 gallons per year.
Increase community water literacy		
Aligns with City Plan Strategic Objectives: 4.6, 4.7, 4.8, 7.4		
Benefits <ul style="list-style-type: none"> Customer has greater understanding of role in the water system Increased customer understanding and support of Utilities' actions and decisions Increased cooperation during difficult conditions 	Example Activities <ul style="list-style-type: none"> Improved and expanded messaging strategies Identify new approaches to education and outreach Develop innovative methods to strengthen K-12 water literacy curriculum 	Example: In 2014 we began providing Home Water Report to select customers; these display usage information, comparisons to similar homes, and provide efficiency tips. Households receiving the reports reduced their use by 2%.

We also highlight a few other promising areas, in addition to our current program and the types of activities identified in the Strategic Objectives sections, that we plan to explore in the coming years. Many of these overlap with several of the Areas of Opportunity or warranted some additional explanation, and thus are discussed in greater detail below.

- **Rate Structures:** Prices send a value signal to customers and help customers determine how they value using water. Rate structures are also designed to cover the cost of providing service.³⁸ Therefore it is important to balance both sides. Along with the Finance team, we intend to explore new means of incentivizing the efficient use of water while supporting revenue requirements.
- **New and Re-Development Incentives & Requirements:** There are a variety of decisions made throughout the development and re-development process. We aim to further explore and support ordinances or regulations like low water use landscape requirements, tap fees and incentive programs that are more aligned to encouraged efficiency from the start, irrigation taps/requirements, greywater ordinances and systems, and more.

³⁸ This includes operational costs (like treatment costs), maintenance costs, and capital costs.

- **M36 Audit & Other Leak Monitoring Initiatives:** A significant way to reduce water loss, reduce bills and repair expenses, is a robust portfolio of leak detection, monitoring, and notification initiatives, including those that address leaks within our distribution system, private property leaks that occur prior to the meter and result in non-revenue waste, and continue to expand and enhance our beyond-the-meter Continuous Consumption Program. The Utilities is also in the process of incorporating the American Water Works Association’s M36 Audit process to ensure “the accountable and efficient management of water supplies” by the Utilities.³⁹
- **Rebate and Incentive Programs:** We aim to ensure that the rebate level is based upon data-driven estimates of the water savings that results from the appliance, fixture, or technology change. This process will also include an approach to phase out or adjust program specifications once Colorado becomes a WaterSense state in September 2016. We also want to expand the reach of our programs to help more customers, either through community partnerships or new approaches to outreach and marketing. We will explore how to reach more low-income or otherwise disadvantaged/at-risk households, rental units, and multi-family units.⁴⁰

³⁹ The M36 represents a National standardized approach to water supply system audits that accounts for all water. <http://www.awwa.org/portals/0/files/publications/documents/toc/m36ed3.pdf>
<http://oawwa.org/SDWA%20Presentations/2013/Water%20Audit%20Presentation,%20November%204,%202013.pdf>

⁴⁰ While this is titled “Rebates and Incentive programs”, efforts to reach underserved populations may also include expansion of direct-install programs like our current partnership with the Larimer County Conservation Corps (LCCC).

5.0 IMPLEMENTATION AND MONITORING

5.1 IMPLEMENTATION

The following principles serve as guidance to implementing existing and new activities. We believe these principles will help to improve effectiveness of our programs, help to achieve our water efficiency goals, and keep our actions in alignment with our overall mission. These principles are also in alignment with several Strategic Objectives in the City Plan, including 3.9, 7.4, 7.5, 7.10, and 7.11. These are further described in Appendix C.

Employ sophisticated data-driven processes and decision-making

Benefits

- Decisions supported by data
- Improved accuracy of water savings estimates
- Increased overall portfolio effectiveness
- Increased program savings and reach through use of behavioral science principles

Example Actions

- Targeted and tailored programs
- Marketing and Communications
- Streamlined, consistent program tracking and reporting
- Develop and monitor targeted metrics to support targeted goals

Cultivate new and bolster existing community and statewide partnerships

Benefits

- Greater trust in the Utilities
- Expanded capacity and reach through project partners
- Support economic health
- Stronger network of conservation partners

Example Actions

- Expand conservation support for nearby water districts
- Expand work with higher education institutions
- Increase public-private projects, like an industry-specific water efficiency conference
- Participate in and contribute to statewide conservation efforts, (e.g. Colorado WaterWise, Colorado Foundation for Water Education)

Coordinate and support symbiotic efforts within Utilities and across the City

Benefits

- Improved consistency and reduced redundancy across City efforts
- Simplified processes for customers
- Greater synergies in the water-energy nexus space

Example Actions

- Resource Conservation unification in Utilities
- Collaborate with efforts of Environmental Services, Planning, Natural Areas, Community Engagement, Nature in the City, Housing and Development, Parks, among others
- Partnerships with the neighboring water districts.

5.1.1 EVALUATION AND DEVELOPMENT

Each year existing activities will be evaluated and adjusted to ensure that they are performing well – both internally and externally – and that they are meeting our goals and objectives. Any new programs will be subject to a holistic vetting process, by bringing in internal stakeholders from other areas of the Utilities and the City to ensure consideration of multiple viewpoints and create organization-wide awareness and support for the new program.

Part of the support for existing new program development will stem from the Utilities' new Program Management Office, which is tasked with launching Utilities activities in a way that is well planned, well-resourced and sustainable. New programs will be developed through a process that includes several key stages. New programs will need clearly stated goals and objectives. Models will be developed to test the viability of the proposed program in meeting water savings and other goals. These models will likely lay the groundwork for metrics that will measure the effectiveness of the programs. Once a proposed process starts to become clear, risk assessment and a business case will be developed to strengthen and validate the proposed conservation program or activity. Proposed processes will be mapped and documented and roles of staff will be assigned. Internal and external stakeholders will be engaged to ensure consideration of multiple viewpoints, create organization-wise awareness and support for the new program, and to make sure the program is supported by our customers.

The programs that ultimately are implemented will be a function of the budgeting process. The City of Fort Collins uses a Budgeting for Outcomes (BFO) approach, which is based on the premise of prioritizing funding for results, rather than focusing on funding inputs and costs. This method shifts the focus from paying for costs to buying results, and emphasizes accountability, innovation, and partnerships. This is a two-year cycle, with the next preparation phase starting in 2016 for the 2017-18 budget cycle. In order to fund new water efficiency programs, we will need to show that the program can deliver results. These results most importantly include improved water efficiency and sustained water savings.

5.2 MONITORING

We cannot monitor or improve what we do not measure. The benefits of monitoring include:

- Feedback as to whether or not conservation activities are affecting change.
- Identification of programs that might not be cost-effective relative to other programs or to developing new supply.
- Clarity of alignment with goals and if a given program warrants expansion, modification or termination.
- Improvement of modeling of supply needs.
- Illustration of savings by various customer segments
- Tracking of participation based on customer class and other factors to help verify programs are accessible to all types of customers
- Prioritization of program development funding and expansion

While the main goal of this plan is identified in terms of GPCD (a common metric used throughout the water industry that captures community water use changes at a high level) we intend to also focus on more specific and targeted measures. This is further discussed in Chapter 3.

In addition to what is discussed in Chapter 3, tracking measures may include but are not limited to:

- Water savings estimates with breakdowns by seasonal vs. baseline, consumptive vs. non-consumptive, treated vs. raw
- Direct and indirect energy savings associated with water saved
- Landscape changes, including the amount of irrigated landscape; annual amount of audited landscape
- Total participation in programs and events, number of new participants, types of participants – including type of customer based on customer class, sociodemographic categories, geographic location, etc.
- Customer use of the Monitor My Use web portal, mobile, and other online tools and alerts
- How effectively events, educational and informational strategies lead customers to participate in a program; if participation in one program leads to participation in other programs

6.0 CHAPTER 6: ADOPTION, PUBLIC REVIEW AND FORMAL APPROVAL

6.1 ADOPTION OF NEW POLICY

6.1.1 ON OCTOBER 13, 2015, THE CITY OF FORT COLLINS CITY COUNCIL REVIEWED THIS DOCUMENT DURING A WORK SESSION. THE PUBLIC COMMENT PERIOD WAS THEN OPEN FROM NOVEMBER 2, 2015 TO JANUARY 15, 2016. ON MARCH 1, 2016 THE CITY OF FORT COLLINS CITY COUNCIL APPROVED AND ADOPTED THIS PLAN.

6.2 PUBLIC REVIEW PROCESS

Community Leader Involvement in Efficiency Plan Development: Communication with community leaders was a critical component for soliciting ideas and developing consensus to support public review process and the Efficiency Plan as a whole.

A Technical Advisory Group was convened with the purpose of exploring options for conservation and issues related to conservation. The group included Water Board members and Utilities' staff as well as staff from the City of Fort Collins' Environmental Services Department:

- Adam Jokerst, Water Resources Engineer
- Alexander Maas, Water Board Member
- Brett Bovee, Water Board Member
- Carol Webb, Water Resources and Treatment Operations Manager
- Donnie Dustin, Water Resources Manager
- Josh Birks, Economic Health Director
- Katy Bigner, Environmental Planner
- Lance Smith, Strategic Financial Planning Manager
- Laurie D'Audney, Water Conservation Manager (retired)
- Lea Pace, Water Conservation Intern
- Lisa Rosintoski, Utilities Customer Connections Manger
- Michelle Finchum, Community Engagement Specialist
- Peter Mayer, Water DM
- Randy Reuscher, Utility Rate Analyst
- Rebecca Hill, Water Board Member
- Renee Davis, Water Conservation Specialist
- Steve Malers, Water Board Chair
- Tiana Smith, Customer Accounts Manager
- Tim Buchanan, City Forester

This group met for seven meetings, with each meeting focusing on a specific topic. The topics were:

- Meeting 1: Water supply & storage; potential water efficiency goals
- Meeting 2: Scenarios based on water efficiency goals
- Meeting 3: Commercial impacts; current and potential conservation activities
- Meeting 4: Revenue effects from lower demand
- Meeting 5: Tree and landscape impacts; landscape survey results
- Meeting 6: Scenarios based on water efficiency goals, identification of conservation activities.
- Meeting 7: Continued identification and discussion of conservation activities.

The Technical Advisory Group not only heard for expert City staff, but also provided input on potential metrics and possible conservation activities. A member of this group also instigated the creation of a figure to help the public understand where water is used and possible points of improved efficiency.

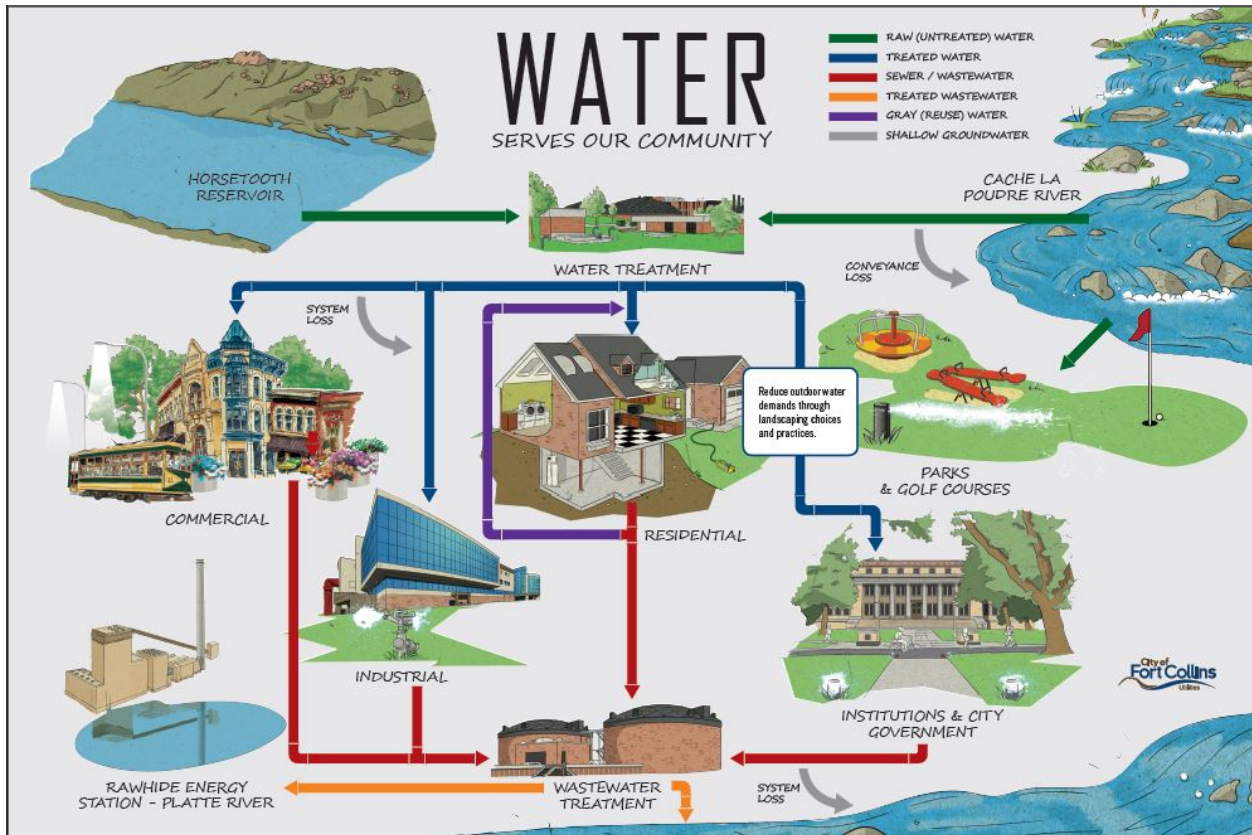


Figure 3 Diagram of Water Sources, Key Infrastructure and Customers

Public Engagement

Communication with the public was done through several channels. The public comment period was open from November 2, 2015 to January 15, 2016. This involved a survey and public comment forum on a Utilities website with the draft of the Plan. Posters were hung around town and we ran social media ads to encourage visits to the website. 11 people provided extensive comments via the online forum.

398 unique people visited the website during this period, though social media had thousands of impressions on viewers so thousands of people are at least aware that the Plan is being updated.

Planners worked in collaboration with CSU's Center for Public Deliberation at a community issues forum in April 2015. This meeting had diverse topics on the agenda and as such provided broad outreach. This was a good chance to engage beyond the usual water-focused audiences.

The Coloradoan, the local Fort Collins newspaper, published the article "Rate changes among water conservation strategies" on November 15, 2015. This article detailed the various approaches to water conservation in the draft Water Efficiency Plan. It also encouraged readers to learn more and provide input during the public comment period. 12 people commented on the Plan through the Coloradoan online comment forum.

The public was also engaged through presentations to various city advisory boards. This effort connected the plan to the public through board members as well as City departments that have a stakeholder role. Boards visited include:

- Water Board work session, April 2, 2015 and October 1, 2015
- Energy Board work session, June 4, 2015
- Planning and Zoning work session, June 5, 2015
- Parks and Recreation Board, June 24, 2015.
- Natural Resources Advisory Board, July 15, 2015 and October 21, 2015.

In addition, we reached out to Economic Advisory Commission and the Land Conservation Stewardship Board. These boards felt our plan was outside their scope, but expressed that if Council directed, they would welcome a presentation.

Local business groups and organizations were also targeted for outreach.

- Associated Landscape Contractors of Colorado, September 10, 2015
- Rocky Mountain Fly Casters, a local chapter of Trout Unlimited, September 16, 2015
- Save the Poudre, October 1, 2015.
 - Save the Poudre member Gary Wockner provided a formal public comment memo to City Council on January 15, 2016.
- Key Accounts semi-annual meeting, November 4, 2015. A follow-up email encouraged commercial and industrial Utilities customers to visit the website and take part in the public comment period.
- Poudre Heritage Alliance, November 18, 2015. An electronic copy of presentation was made available to the group with a request to distribute to their board.
- Downtown Development Authority, materials requested for the January 20, 2016 in lieu of a presentation (presentation originally scheduled for their December 10 meeting, but would have had to have been pushed to a meeting beyond the March City Council session).
- Northern Colorado Home Builders Association's newsletter carried information and a link to the online survey.
- Odell Brewing Company, January 13, 2016
- State Senator Kefalas, January 22, 2016

6.3 6.3 LOCAL ADOPTION AND STATE APPROVAL PROCESSES

6.3.1 THIS PLAN WILL BE PRESENTED AT A FORT COLLINS CITY COUNCIL WORK SESSION IN OCTOBER 2015 AND AGAIN AT A REGULAR SESSION IN MARCH OF 2016. AT THE REGULAR SESSION, FORT COLLINS CITY COUNCIL ADOPTED THE PLAN. FURTHER SUPPORT FROM CITY COUNCIL WAS DEMONSTRATED IN THE 2016 BUDGETING PROCESS WHEN THE COUNCIL PRIORITIZED ADDING ADDITIONAL STAFF. THE PLAN WAS SENT TO CWCB FOR APPROVAL IN JANUARY 2017.

6.4 6.4 PERIODIC REVIEW AND UPDATE

Progress towards the 130 gpcd by 2030 goal will be monitored annually. The water efficiency plan will be reviewed annually during the drafting of Water Conservation's annual report. This report is submitted to Fort Collins Utilities' Water Board for review. An updated water efficiency plan will be developed no later than 2024 (7 years from the anticipated CWCB 2017 submission date).

GLOSSARY

1-in-50 Year Drought Criterion - criterion adopted in the current Water Supply and Demand Management Policy that defines the level of risk for the City's water supply system; a drought is a period of below average runoff that can last one or more years and is often measured by its duration, average annual shortage and cumulative deficit below the average; a 1-in-50 drought corresponds to a dry period that is likely to occur, on average, once every 50 years; although the Poudre River Basin has several drought periods in its recorded history, it is difficult to assess whether any of these droughts were equal in magnitude to a 1-in-50 drought; the 1985 Drought Study developed the 1-in-50 drought used in assessing the Utilities water supply system; this drought period is six years long and has a cumulative deficit of 550,000 acre-feet, which represents annual river volumes that are about 70% of the long-term average for the Poudre River; see also "Statistically Based Drought Analysis"

Acre-Foot or Acre-Feet (AF) - volume of water equal to about 326,000 gallons; one acre-foot can supply around three to four single family homes in Fort Collins per year; for storage comparison the maximum volume of Horsetooth Reservoir is about 157,000 acre-feet

Active Capacity - the usable capacity of a reservoir for storage and regulation of inflows and releases that does not include any capacity below the reservoir's lowest outlet (which is known as dead capacity)

Carryover - used in reference to storage; it is the ability to save water in storage for use at a later time, most notably in following years

Colorado-Big Thompson (CBT) Project - a Bureau of Reclamation project that brings water from the Colorado River basin to the east side of the continental divide via a tunnel and the Big Thompson River to several locations including Horsetooth Reservoir; operated by the Northern Colorado Water Conservancy District (or Northern Water); Fort Collins Utilities currently owns 18,855 units of the 310,000 total units in the CBT project

Direct Flow Rights - water rights that can be taken for direct use, as opposed to storage rights that can be taken for later use; see also "Senior Water Rights"

Drought Criterion - The drought criterion states that in a 1-in-50 year drought the Utilities should be able to meet the planning demand level. This is an important criterion because not only will demands often be higher in drought periods due to less precipitation, water supply systems generally will also yield less water. The Utilities has used a 1-in-50 year drought criterion since the original 1988 Water Supply Policy.

ELCO - short for East Larimer County Water District

Evapotranspiration - the combination of the water lost (evaporate) to the atmosphere from the ground surface, evaporation from the capillary fringe of the groundwater table, along with the plant transpiration, which is evaporation of water from plant leaves. Evapotranspiration is affected by temperature, relative humidity, wind and air movement, soil moisture availability, and the type of plant. For more information see: <http://water.usgs.gov/edu/watercycleevapotranspiration.html>

FCLWD - short for Fort Collins-Loveland Water District

Firm Yield - a measure of the ability of a water supply system to meet water demands through a series of drought years; for the Fort Collins Utilities, this means being able to meet the planning demand level and storage reserve factor through the 1-in-50 year drought criterion; see also “1-in-50 Year Drought Criterion”, “planning demand level” and “storage reserve factor”

GMA – short for Growth Management Area, which is the planned boundary of the City of Fort Collins’ future City limits

GPCD - short for gallons per capita per day; a measurement of municipal water use; for the Fort Collins Utilities, GPCD is calculated based on the total annual treated water produced at the Water Treatment Facility for use by all Water Utility customers (minus large contractual customers and other sales or exchange agreements) divided by the estimated population of the Water Utility’s service area and 365 days

Legal Return Flows or Return Flow Obligations - refers to legal requirements when changing water rights from agricultural to municipal use; this process requires obtaining a decree from Colorado Water Court that involves detailed analysis of the historic agricultural water use, including the water diversions, amount used by the crops, and the return flow patterns of the water not used by the crops; terms in the decree to prevent municipalities from taking more water than was historically taken and replacing return flows in the right amount, location and time to prevent injury to other water rights

LiDar: This is a remote sensing technology that can be used in large-scale landscape analysis.

Northern Water or NCWCD - short for Northern Colorado Water Conservancy District (NCWCD); Northern Water operates the Colorado-Big Thompson (CBT) Project and is involved in several other regional water projects on behalf of their participants; see also “Colorado-Big Thompson (CBT) Project”

NPIC - short for North Poudre Irrigation Company; an irrigation company that supplies water to farmers north of Fort Collins and is the owner of all water currently stored in Halligan Reservoir

Planning Demand Level - level of water use (demand) in GPCD used for water supply planning purposes that is a factor in determining the amount of water supplies and/or facilities needed; see also “GPCD”

RWR – short for Raw Water Requirements, which requires new development to turn in water rights or cash-in-lieu of water rights to support the water needs of that development; cash is used to increase the firm yield and long-term reliability of the Utilities’ supply system (e.g., purchase additional storage capacity)

Senior Water Rights - refers to Colorado water law’s use of the “prior appropriation” or priority system, which dictates that in times of short supply, earlier water rights decrees (senior rights) will get their water before others (junior rights) can begin to use water, often described as “first in time, first in right”

Storage Reserve Factor - refers to a commonly used engineering principle in designing water supply systems to address short-term supply interruptions; as defined in the Water Supply and Demand Management Policy, the storage reserve factor incorporates having 20 percent of annual demands in storage through the 1-in-50 drought which equates to about 3.5 months of winter (indoor) demands or 1.5 month of summer demands

Water Rights Portfolio - the mix of water rights owned by a water supplier; typically includes water for direct use, as well as for storage for later use; for the Fort Collins Utilities, includes City owned water rights, owned and/or converted shares in agricultural rights, storage rights at Joe Wright Reservoir, and ownership in the CBT project

WSDMP - short for Water Supply & Demand Management Policy, which provides Fort Collins Utilities guidance in balancing water supplies and demands

Yield or Water Rights Yield - refers to the amount of water that is produced from a water right; the yield of water rights vary from year to year depending on the amount of water available (i.e., low or high river runoff) and the priority of the water right; see also "Firm Yield" and "Senior Water Rights".

APPENDIX A: MATERIALS RELATED TO CHAPTER 1

The following are descriptions of the various water supplies currently in the Utilities water supply portfolio:

Poudre River Basin Water Rights:

- Senior Direct Flow Decrees: The City has five very senior direct flow decrees on the Poudre River that are available to the City most of the time. Only in very severe dry periods are the diversions limited.
- Junior Direct Flow Decrees: These junior rights are only in priority during the peak runoff period when most of the other rights on the Poudre River have been satisfied. In dry years, the City may not be able to divert anything under these rights.
- Pleasant Valley and Lake Canal Shares: The City owns a substantial portion of the shares in this mutual irrigation company. The amount of water the City is entitled to divert to meet treated water demands depends on the number of shares the City designates for such use and which priorities owned by the irrigation company are in priority during the season.
- Southside Ditches: The City owns shares of stock in the Arthur, Larimer No. 2, New Mercer and Warren Lake irrigation companies, often referred to as the Southside Ditches. With 13 separate priorities, yields vary considerably from year to year. Much of the yield comes from a couple of large junior rights and normally only yields during the high runoff months of May and June.
- Michigan Ditch and Joe Wright Reservoir System: This system consists of a ditch that diverts water from the Michigan River drainage across the divide into the Poudre River Basin, Joe Wright Reservoir and storage capacity in Meadow Creek Reservoir. Joe Wright Reservoir includes about 6,500 acre-feet of active storage and is the only storage facility owned and operated by the City. There are usually periods during the peak runoff season in which the reservoir is full and Michigan Ditch water is available if it can be taken directly to meet demands. Joe Wright Reservoir is used primarily to regulate the annual Michigan Ditch flows and has limited carryover capacity to provide drought protection for the City. The City also has storage capacity in Meadow Creek Reservoir, which is used to release water to downstream senior rights on the Michigan River.
- Water Supply and Storage Company Shares: The City owns about 27 shares in this irrigation company. Since the City-owned shares are not presently decreed for municipal use, this water is usually rented back for agricultural use.

Colorado-Big Thompson Water System:

- Horsetooth Reservoir: Water from Horsetooth Reservoir, a part of the C-BT Project, can be delivered to the City's water treatment facility or to the Poudre River. The following sources are available for use from Horsetooth Reservoir.
- Windy Gap Water: The City receives Windy Gap water from Platte River Power Authority (PRPA) as payment for 4,200 acre-feet of reusable effluent made available to PRPA by the City. The reusable effluent is the result of a Reuse Plan that involves the City, PRPA, and the Water Supply and Storage Company (WSSC). The 4,200 acre-feet of Windy Gap water is dedicated for large contractual use that requires reusable water. As part of the Reuse Plan, the City is required to deliver 1,890 acre-feet of single use water to the WSSC.
- North Poudre Irrigation Company (NPIC) Shares: The City currently owns about 3,564 shares of NPIC. Each share consists of native water supply (which is primarily decreed for agricultural use)

and 4 units of C-BT water. Unless the agricultural portion of each share is changed for municipal purposes, the City can only use the C-BT portion of the shares to meet treated water demands.

- West Fort Collins Water District (WFCWD) Water: Through an agreement with the WFCWD, the City provides treated water to their customers and in return, gets reimbursed with an equivalent amount of C-BT water. In recent years, the amount transferred to the City has been about 500 acre-feet each year.

APPENDIX B: MATERIALS RELATED TO CHAPTER 2

Table: Collected Service Area Trends, 2001-2014

Year	Service Area Population	Annual Water Use (MG)	Average Day Use (MGD)	Actual Use (GPCD)	Normalized Average Use (GPCD)	Peak Day Use (MGD)	Actual Peak Day Use (GPCD)	1 in 50 Normalized Peak Day Use	Annual Precipitation (inches)	ETos Grass Tot (in)
2001	121,300	9,978	27.3	198	198	55.8	428	503	12.3	45
2002	123,700	9,599	26.2	183	189	51.4	378	411	9.3	47
2003	125,500	8,280	22.6	154	157	46.9	346	383	18.2	49
2004	125,800	7,984	21.8	146	150	42.3	307	327	18.1	44
2005	126,900	8,497	23.3	155	155	50.1	365	363	16.2	49
2006	127,800	9,268	25.4	172	156	48.9	353	350	11.2	51
2007	128,400	8,860	24.2	162	156	47.5	342	356	13.7	44
2008	128,700	8,352	22.8	153	153	44.3	321	333	13.8	50
2009	128,900	7,391	20.2	135	147	37.1	265	304	21.9	46
2010	129,000	7,830	21.4	146	144	40.8	295	323	14.1	48
2011	129,100	7,621	20.8	141	144	39.7	285	289	17.8	49
2012	129,200	8,757	23.9	165	152	46.8	342	315	10.8	54
2013	129,300	7,560	20.7	141	147	43	312	303	18.8	47
2014	130,200	7,437	20.4	139	143	37.2	269	288	16.7	47

The following are descriptions of the Current Water Conservation Program Activities, along with the first year of full implementation.

Foundational Activities

- Conservation-oriented rate structures (2003) – Tiered rates (increasing block rate structure). There are currently three tiers for residential single-family and duplex customers, one tier for multi-family units, and two tiers and commercial customers.⁴¹
- Continuous Consumption program (2015): this program developed a data query that checks the meter data for meter readings that have continuously remained above zero for 72 hours. Customers with the highest continuous flow rates are contacted to make them aware of the continuous consumption and the likely leak. Staff troubleshoots with the customer to try to find the source of continuous use.
- Metering (2003): Commercial and multi-family units have been metered for decades; the Utilities fully metered residential customers by 2003. The Utilities transitioned to advanced metering infrastructure (AMI) in 2014, known as Advanced Meter Fort Collins (AMFC) The data resolution is hourly intervals for water and 15-minute intervals for electric.
- Monitor My Use (2014): this web-based portal was developed to provide customers near-real time access to their historical and current electric and water usage and costs. The portal also provides comparisons to the previous bill period, and illustrates which tier you are currently in. There are alert-based features that a customer can use to provide automatic notifications when they reach a certain usage level or cost level.⁴² A mobile version was launched in December 2014.
- Online water use calculator (2012): Customers can use an online calculator with their household parameters and historic water consumption to identify ways to improve efficiency and reduce use.⁴³
- Seasonal rate structures (2003): Multi-family and commercial customers face higher rates from May through October.
- Utility water loss program (1993): Sonar equipment is used to listen for leaks in the water mains and pinpoint their locations. Crews monitor water leaks on an ongoing basis, with a two-year cycle to survey all water mains. Catching leaks before they have surfaced saves water and costs of excavation and repairs, and supports the wasting water ordinance.

⁴¹ For the most current residential rates see: <http://www.fcgov.com/utilities/residential/rates/water>. Multi-family units are often not sub-metered and instead have a base charge which varies by the number of dwelling units. Commercial customers' rates are based on the size of the meter; this includes the base charge, the volumetric charge, and the volume above which customers face the second-tier rates. See <http://www.fcgov.com/utilities/business/manage-your-account/rates/water> for the most current rates.

⁴² This tool is only available for residential customers. Commercial customers currently have access to a different tool called MV Web and the Utilities is exploring new methods and systems to address commercial customers' needs.

⁴³ Currently, the Utilities' website provides a link to the following website developed by the Alliance for Water Efficiency: <http://www.home-water-works.org/>

Targeted Technical Assistance and Incentives

- Commercial custom rebates (2011): offered for any technology (e.g. cooling tower conductivity control, leak detection and repair, fixture replacement, etc.) that has a documented water savings from the current equipment.
- Commercial facility assessments (2004): facility audits are performed to assess water and energy use and make recommendations for improved efficiency. During these assessments, low-flow aerators are installed at no cost to the business.
- Home efficiency audits (2009): residential customers are offered an energy and water audit of their home to identify equipment and actions that can improve efficiency for a small fee. Faucet aerators and showerheads are installed at the time of the audit.
- Home efficiency loans/on-bill financing (2010): this program offers a low cost, no-money-down financing option for up to 20 years. Loans are conveniently repaid by the customer through their monthly utility bill.
- Indoor Appliance and Fixture Rebates (residential and commercial):
 - Clothes Washer (2003): Available for eligible EnergyStar labeled clothes washers.
 - Dishwasher (started 2007): Available for eligible EnergyStar labeled dishwashers.
 - Toilet (2010): Available for eligible WaterSense labeled toilets and urinals.⁴⁴
 - Showerhead (2011): Available for eligible WaterSense labeled showerheads.
 - Outdoor Equipment Rebates (residential and commercial):
 - Sensors (rain, soil moisture), high-efficiency nozzles, pressure-reducing heads, pressure regulators, and smart irrigation controllers
- Low income retrofit program (2007): provides low income single- and multi-family households with toilet, showerhead and faucet aerator retrofits. This work is often done in partnership with Larimer County Conservation Corps.
- Restaurant pre-rinse spray valve distribution (started 2011): low flow pre-rinse spray valves (to rinse trays of dishes prior to washing them) are installed at no charge for restaurants and other food service operations.
- Sprinkler system audits (1999): audits are offered to homeowners and homeowner associations to help them improve sprinkler system efficiency.
- Xeriscape design/incentive program (2010): provides homeowners a one-on-one consultation with a landscape design professional for a small fee.

⁴⁴ The toilet rebate program also includes a mandatory toilet recycling component. The porcelain from recycled toilets is used by the Streets Department as a road base.

<http://www.fcgov.com/utilities/residential/conserves/water-efficiency/toilet-rebates/toilet-recycling>

Educational Activities

- Business education programs (2004): Programs are offered to commercial customers on a variety of environmental topics, including water conservation. Staff provides newsletters, mailings, meetings and seminars on topics of interest to specific businesses, such as restaurants, hotels, car washes, landscapers, and key accounts.
- Community education programs (1977)⁴⁵: These programs include the Educators' workshops, contractor trainings, and partnerships to put on other events like the Residential Environmental Program Series. The Utilities also conducts educational programs about Xeriscape landscaping, watering techniques and practices and general water conservation. A daily Lawn Watering Guide is published in the Fort Collins Coloradoan and on the City's website during the watering season.
- Conservation kit giveaways (1990): Free conservation kits with indoor and/or outdoor water-saving devices and information are offered periodically to customers during events.
- Conservation public information efforts (1977): Information is disseminated via bill inserts, bus benches, billboards, events, newspaper articles, TV and radio announcements, Utilities website information, social media, and more. The team also serves as technical experts to help commercial customers with water use or billing questions. Displays are set up at several community events including the Sustainable Living Fair, Harvest Festival, Business Innovation Fair and many others.
- Home Water Reports (2014): These reports are delivered to a portion of customers on a bi-monthly basis. The reports provide households with information on their current water use and comparisons to historical use as well as similar households' use.⁴⁶
- Hotel and restaurant conservation material distribution (2003): A three-card set is available for hotels and other lodging establishments to inform guests about importance of water conservation to our area and to encourage the reuse of towels and linens. Tent cards are available for restaurants telling customers that "water is served upon request."
- K-12 education programs (1977): Presentations and hands-on activities are provided to school classes on water topics, including the history of water in Fort Collins, water use and conservation, water chemistry and watersheds. Fort Collins Utilities is a co-sponsor of the annual Children's Water Festival.
- Watershed tours (2012): Educational bus tours of the Utilities' Cache la Poudre watershed; involves information about drinking water, protection of water resources, water quality, and managing urban watersheds.
- Xeriscape Demonstration Garden (1986): Staff oversees maintenance of the City's Xeriscape Demonstration Garden and provides tours at organized events and upon request. We are also partnering to support various demonstration gardens and other events at the Gardens on Spring Creek.⁴⁷

⁴⁵ <http://www.fcgov.com/utilities/community-education>

⁴⁶ The Utilities implements a similar program (Home Energy Reports) for electric customers.

⁴⁷ <http://www.fcgov.com/gardens/>

Ordinances and Regulations

- Green building codes (2011)⁴⁸: Existing building codes include many elements that support green building; the code green amendments represent the next steps along the path of integrating green building practices into mainstream construction. These codes include a requirement for bathroom and kitchen faucet aerators, showerheads and toilets to not exceed the flow rates of WaterSense labeled fixtures.
- Landscape and irrigation standards (1994) - New development landscape and irrigation plans are reviewed for compliance with the Land Use Code's water conservation standards. As part of these standards, a rain shut-off device and a post-installation audit are required for commercial sprinkler systems.
- Parkway landscaping regulations (2013)⁴⁹ – The City updated the Streetscape Standards to include more flexibility to xeriscape the parkway, the strip of land between a residential street and the sidewalk.
- Plumbing standards (1978): All construction within the City of Fort Collins shall comply with the most recent International Plumbing Code, among other codes and standards.⁵⁰
- Restrictive covenants ordinance (2003) – City Code prohibits homeowner association covenants from banning the use of Xeriscape or requiring a percentage of landscape area to be planted with turf, if the homeowner owns the property and pays for the water that irrigates the landscape.
- Soil amendment ordinance (2003): requires builders to amend the soil for new landscapes.
- Wasting water ordinance (1917) – staff enforces the section of the City Code that prohibits wasting water. Wasting water complaints are investigated. Complaints are used as an education tool, but enforcement by ticketing is also an option.⁵¹
- Water efficiency upgrades at City buildings (2010): The City is committed to building new City buildings to the LEED standards; including water efficiency upgrades. Audits are conducted at existing City facilities and upgraded water-efficient indoor fixtures and sprinkler system equipment are installed. The City has a sustainability goal to reduce municipal building water use (normalized to account for weather conditions), by 20% by 2020.⁵²
- Water Supply Shortage Response Plan (2003): This plan has a series of measures to be enacted, including water restrictions, for various levels of water shortage.⁵³

⁴⁸ <http://www.fcgov.com/enviro/green-building.php>

⁴⁹ <http://www.fcgov.com/planning/streetscapedesign.php>

⁵⁰ <http://www.fcgov.com/building/codes.php>

⁵¹ City Ordinance No. 089, last updated in 2014.

⁵² <http://www.fcgov.com/sustainability/goals.php>

⁵³ City Ordinance No. 088, last updated in 2014.

Other Activities

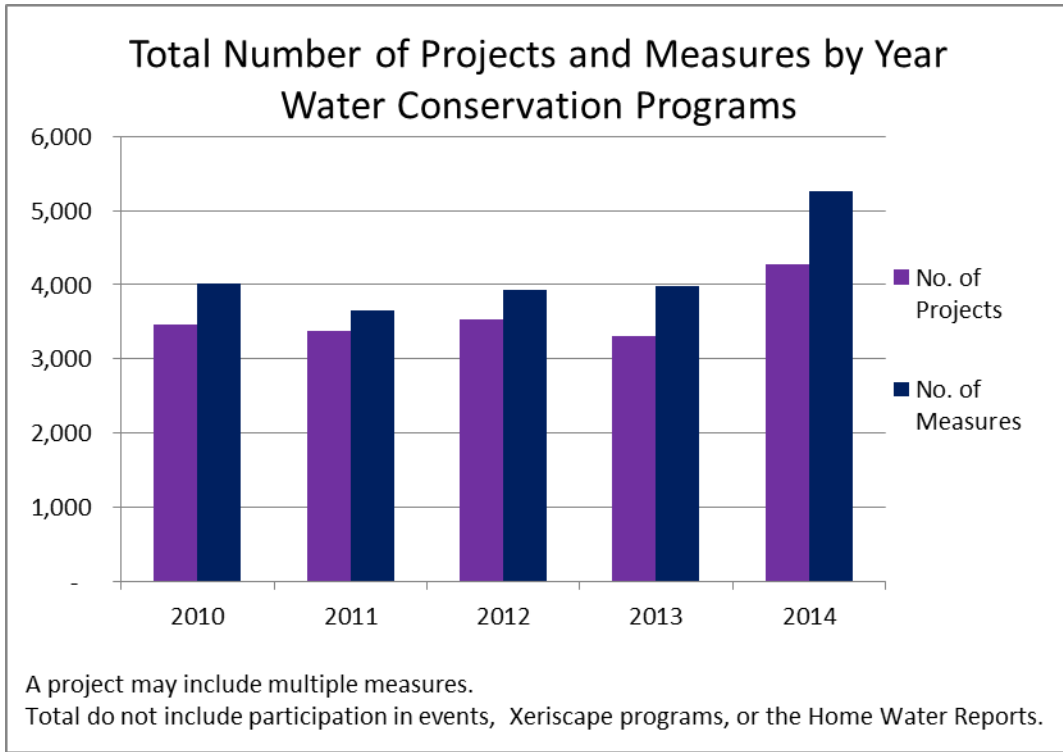
- Backwash water recycling (2003): Backwash water recycling equipment at the water treatment facility treats backwash water and recycles it to the beginning of the treatment process.
- Large customer reuse (1985) – Treated wastewater from the Drake Water Reclamation Facility is pumped to Rawhide Power Plant for landscaping and cooling water.
- Raw water for City irrigation: Raw water is used to irrigate the majority of the City’s parks, cemeteries, and golf courses.⁵⁴

Program Participation 2010-2014 (does not include event attendance)

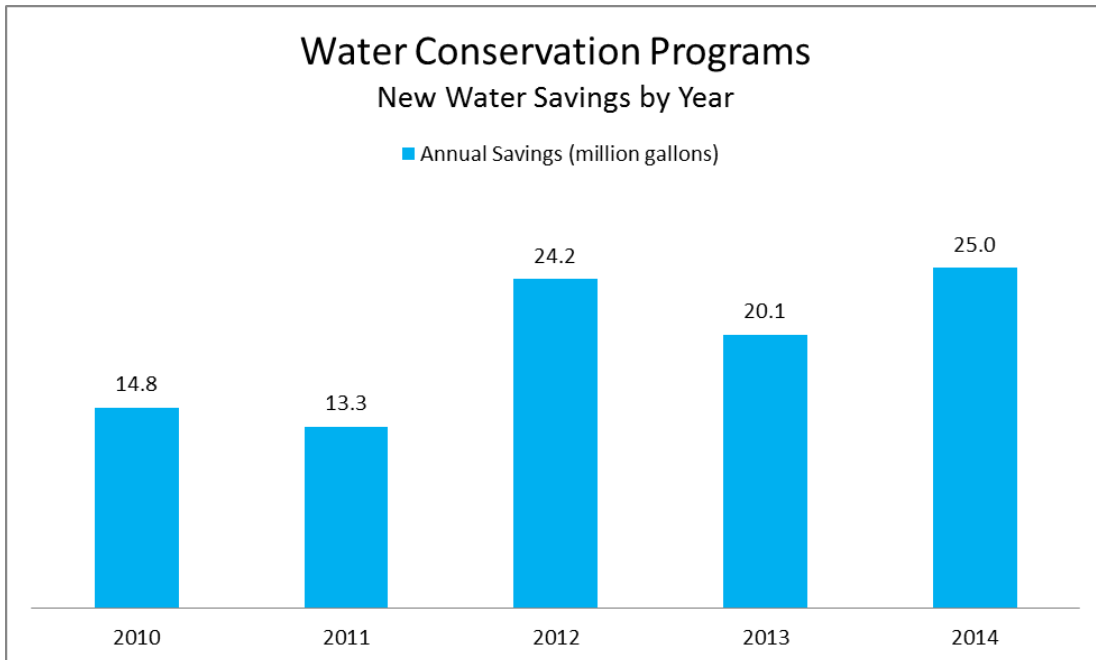
Program	2010	2011	2012	2013	2014
Clothes Washers	1249	1366	993	971	1058
Commercial Clothes Washer	--	--	0	1	0
Commercial Dishwasher	--	--	0	1	0
Commercial Facility Water Assessments	81	77	93	268	281
Commercial Kitchen Info Program	--	--	32 nozzles, 72 aerators	16 rebates, 79 items	--
Commercial Restroom	--	1	4 rebates; 443 items	16 rebates; 79 items	27 rebates; 249 items
Commercial Sprinkler Audits	2	1	0	0	0
Commercial Sprinkler Equipment	--	15	56 rebates; 964 items	35 rebates; 2266 items	12 rebates; 165 items
Custom Commercial Rebate	--	2	1	3 rebates; 14 items	0
Dishwasher	780	880	635	648	787
ELCO Audits	--	--	42	48	68
FCLWD Audits	112	82	67	94	97
Garden-in-a-box	--	68	63	74	--
HOA Sprinkler Audits	5	12	14	13	11
Home Efficiency Audits	466	519	592	683	662
Home efficiency loans/On-bill Financing	13	6	5	0	7
Home Water Reports	--	--	--	--	10,000
Irrigation Plan Review	11	42	44	49	69
Irrigation Site Inspection	21	24	28	34	52
Landscape Plan Reviews	29	49	54	73	59
Low Income Retrofit Program	--	250 homes	275 homes	275 homes	482 homes
Residential Sprinkler Audits	449	331	232	394	232
Residential Sprinkler Equipment	164	118	137 rebates; 170 items	108 rebates; 880 items	97 rebates; 135 items
Residential Toilet	479	573	912	651	1004
Showerhead	--	21	27	25	73
Xeriscape Design Clinic/Assistance	55	50	37	--	46

⁵⁴ Many of these properties have only ever been irrigated with raw water, thus the “start” date varies.

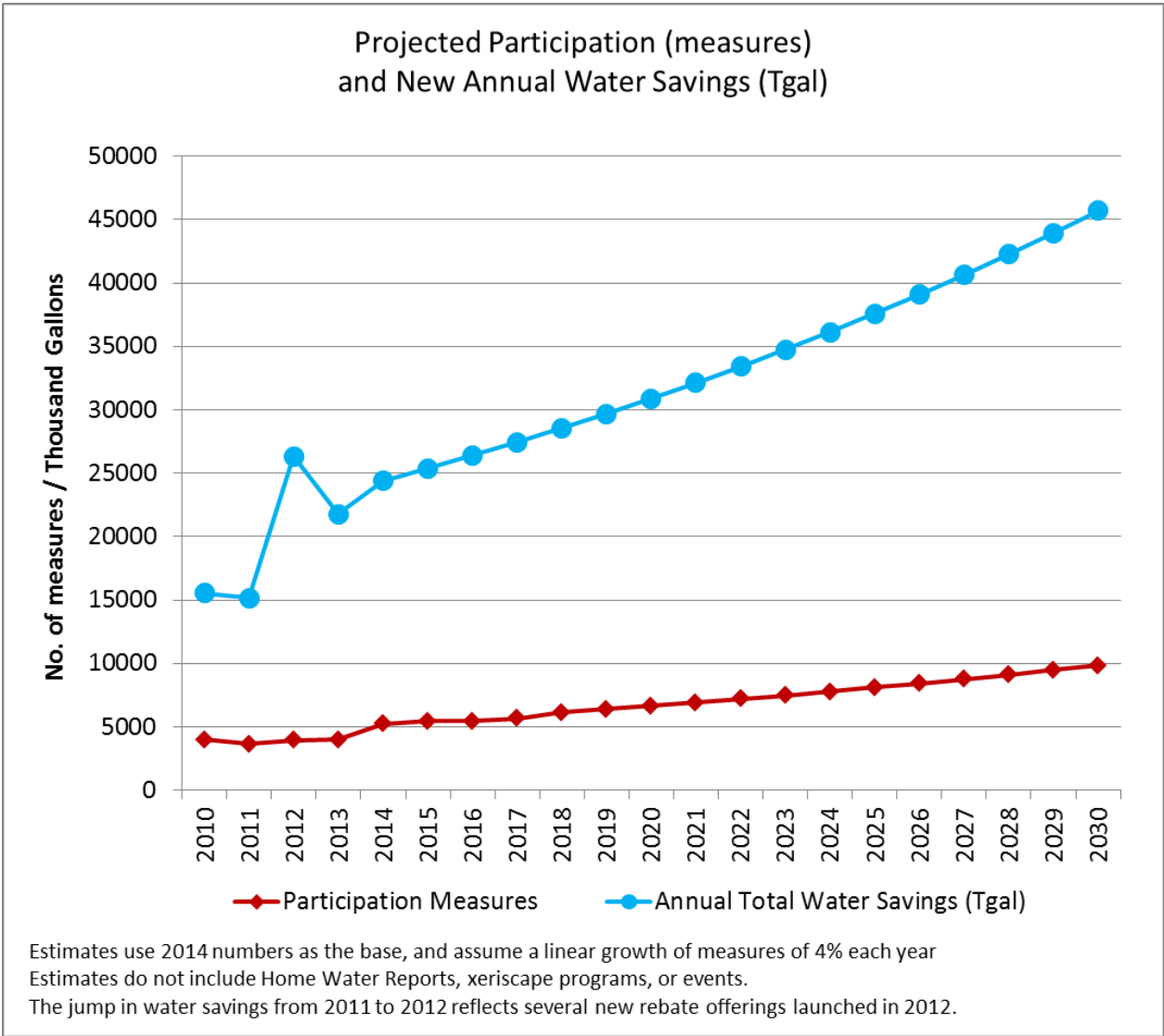
Below is a graph of the total number of projects and measures by year from 2010 to 2014.



Below is a graph of the estimated new annual water savings in million gallons. These totals do not reflect savings from Xeriscape programs, Home Water Reports, or events.



See below for a graph of projected participation (where participation here means total number of measures) and annual new water savings in thousand gallons, where the savings includes customer water use reductions as well as savings from treated less water and avoiding losses throughout the distribution system.



APPENDIX C: MATERIALS RELATED TO CHAPTER 3

Water Efficiency and Conservation Activities and related actions support the following Strategic Objectives from the City's 2015-16 Strategic Plan.⁵⁵

City of Fort Collins Strategic Objectives most relevant to Water Conservation Activities	
Key Strategic Outcome: Environmental Health	
	4.1: Improve and protect wildlife habitat and the ecosystems of the Poudre River and other urban streams.
	4.2: Achieve environmental goals using the Sustainability Assessment framework.
	4.6 Engage citizens in ways to educate and change behavior toward more sustainable living practices.
	4.7: Increase the community's resiliency and preparedness for changes in climate, weather and resource availability.
	4.8: Protect and monitor water quality, and implement appropriate conservation efforts and long-term water storage capability.
Key Strategic Outcome: Economic Health	
	3.5: Sustain high water quality to support the community and water-dependent businesses.
	3.6: Maintain utility systems and services; infrastructure integrity; and stable, competitive rates.
	3.7: Support sustainable infill and redevelopment to meet climate action strategies.
	3.9: Provide transparent, predictable and efficient processes for citizens and businesses interacting with the City.
Key Strategic Outcome: Community and Neighborhood Livability	
	1.3: Direct and guide growth in the community through appropriate planning, annexation, land use and development review processes.
	1.11: Maintain and enhance attractive neighborhoods through City services, innovative enforcement techniques, and voluntary compliance with City codes and regulations.
Key Strategic Outcome: Safe Community	
	5.10: Provide a high-quality, sustainable water supply that meets or exceeds all public health standards and supports a healthy and safe community.
Key Strategic Outcome: High Performing Government	
	7.4 Strengthen methods of public engagement and reach all segments of the community.
	7.6: Enhance the use of performance metrics to assess results.
	7.9: Improve productivity, efficiency, effectiveness, customer service and citizen satisfaction in all areas of the municipal organization.
	7.10: Implement leading-edge and innovative practices that drive performance excellence and quality improvements across all Service Areas.
	7.11: Proactively influence policy at other levels of government regulation.

⁵⁵ <http://www.fcgov.com/citymanager/pdf/strategic-plan-2015.pdf>

February 13, 2024

WORK SESSION AGENDA ITEM SUMMARY

City Council



STAFF

Alice Conovitz, Water Conservation Specialist
Mariel Miller, Water Conservation Manager

SUBJECT FOR DISCUSSION

2024 Water Efficiency Plan Status.

EXECUTIVE SUMMARY

The purpose of this item is to describe the state-mandated Fort Collins Utilities (Utilities) Water Efficiency Plan (WEP) and the 2024 update process. The updated WEP will set conservation goals, incorporate extensive public engagement focusing on marginalized community members, and employ numeric modeling and an equity analysis to help prioritize future water conservation and efficiency strategies. Potential strategies include education, voluntary incentives, regulations, and standards. The Agenda Item Summary also provides background on water use and Utilities' work to manage water supply and demand.

GENERAL DIRECTION SOUGHT AND SPECIFIC QUESTIONS TO BE ANSWERED

1. What is Council's vision for the Water Efficiency Plan and how it addresses water conservation and efficiency?
2. What does Council need to know from our engagement, equity, analysis, and water demand modeling efforts?

BACKGROUND / DISCUSSION

Water is an essential resource for all of us. The City of Fort Collins and Utilities have a strong commitment to ensure its efficient use. Utilities is updating its [2015 WEP](#) (Attachment 1). The updated plan will:

- meet Colorado Water Conservation Board (CWCB) requirements
- set new goals to reduce the amount we use within the Utilities water service area
- guide water use for Utilities customers and the City organization
- inform Utilities planning decisions and better use of resources

By updating our water efficiency goals and strategies, we aim to continue reducing water use in our service area to increase equitable and resilient outcomes for all community members through minimizing the

frequency and severity of water shortages and providing all customers the opportunity to participate in conservation programs.

WEP recommended strategies are expected to include a mix of education and voluntary incentives, such as rebates, and required actions which could be implemented through codes, standards, and regulations. New water conservation goals and strategies set in the WEP will focus on long-term reductions in water demand to minimize the frequency and severity of water shortages for Utilities' water customers. In contrast, short-term responses to water shortages are defined in Fort Collins City Code Section 26-167 and the City's [Water Shortage Action Plan](#)¹ (WSAP).

Alignment

The WEP aligns with the City of Fort Collins' Strategic Objective ENV 4.4, "Provide a resilient, reliable, and high-quality water supply," and the Water Utility's mission statement, "We are a One Water Utility, providing exceptional water services for our community through integrated, resilient, and equitable practices and systems." Other City and state policies and plans that align include:

- Water Supply and Demand Management Policy
- WSAP
- Our Climate Future
- City of Fort Collins 2022 Strategic Plan
- Municipal Sustainability and Adaptation Plan
- City Plan
- Colorado Water Plan

Collaboration with Other Water Providers

Certain areas within City limits are served by other neighboring utility providers. This creates complexities around project planning, coordination, and customer communications. Other water providers have their own WEPs that describe goals and strategies for their service areas; however, Utilities values these partnerships and continues to look for ways to collaborate with other providers. To-date staff have had several meetings with East Larimer County and Fort Collins-Loveland Water Districts to discuss the WEP. Staff plans for future discussion related to identifying opportunities to work together on conservation and efficiency strategies and will incorporate findings in the WEP.

WEP Update Process

The CWCB requires water providers to prepare WEPs to outline how they plan to enhance water efficiency to combat increasing competition and demand for water. Utilities received grant funding (\$160,000) from the CWCB and a one-time budget enhancement offer (2023-2024; \$145,000) to fund consultant support for numeric water demand modeling, inclusive public engagement, and an equity analysis. The Utilities' Water Conservation team (Water Conservation) began work on the WEP update in January 2023 and targets completion by late 2024.

To steer the process and selection of water conservation goals and strategies, staff developed guiding principles as a foundation for the WEP update. These are presented in Attachment 2. Building on the guiding principles, the WEP update involves the following key tasks:

¹ The WSAP establishes conditions and restrictions to manage Utilities' water use when there is a projected water shortage. Restrictions work well in infrequent and severe situations, but frequent restrictions can have short- and long-term impacts to businesses; landscapes, especially tree health; and water revenue. Available online at fcgov.com/WSAP.

- **Model water savings from conservation strategies under a range of current and potential conditions, including climate, population, and population density.**
 - Water conservation and efficiency strategies selected for evaluation will be based on community engagement and input from staff and leadership, as well as data availability and model capabilities. Staff will prioritize the strategies based on potential water savings, equity, cost, resources, and feasibility.
- **Engage with staff to identify conservation goals and strategies for how the City uses water.**
 - Follow a One Water² approach, which aims to meet both community and ecosystem needs for resilience and reliability through collaboration and integrated and equitable management of water resources.
- **Engage with the community, with an emphasis on marginalized community members.**
 - Develop relationships with engaged community members by working with four compensated Community Consultants who will connect with their networks; conduct focus groups with marginalized and/or highly impacted community members; meet with the City's Climate Equity Committee; broadly distribute a survey designed to inform goals and strategies; and provide materials in English and Spanish.
 - OurCity (ourcity/fcgov.com/WEP) serves as the primary information source and survey hosting platform.
- **Analyze equity of both the update process and proposed conservation and efficiency strategies.**
 - Track engagement participation to determine if tactics to involve marginalized community members in the WEP update process have worked.
 - Perform gap analysis of strategies and the customer demographics that are likely to participate, to evaluate if Utilities is creating opportunities for all customers to reduce their water bills and be more resilient.
 - Develop and implement an equity evaluation of the potential outcomes of strategies so equity can be considered along with water savings potential and cost when prioritizing which strategies to implement.

Water Use and Demand Management Overview

Utilities currently provides water to approximately 32,800 residential and 2,800 commercial customer accounts. The 2022 estimated residential population served was 137,200. On average, residential customers use about 60% of the treated water delivered each year and commercial customers use about 40%. Commercial customers include large irrigation-only accounts and landscapes like those maintained by homeowner associations. Each year, indoor water use accounts for about 57% of total treated water used, while outdoor and seasonal uses are about 43% of the annual total on average. The [2022 Water Conservation Annual Report](#) (Attachment 3) summarizes current treated water demands by sector and savings from conservation programs.

Since 2000, population has grown by 16% while water use within Utilities' water service area has decreased by 34% per capita. However, that rate of decrease slowed between years 2020-2022.

² One Water is an integrated planning and implementation approach to managing finite water resources for long-term resilience and reliability, meeting both community and ecosystem needs, as defined by the Water Research Foundation in the 2017 Blueprint for One Water. Utilities anticipates developing a One Water strategic plan by 2025.

Water Conservation staff develop and implement strategies to save water. These activities include planning, programming, and policies for indoor and outdoor water use by residential, commercial, and multi-family customers. Our current programs (residential: fcgov.com/save-water and commercial: fcgov.com/water-efficiency) largely focus on incentives and education around reducing water use at existing properties. For new construction, Water Conservation has more recently addressed developing efficiency-related development standards and codes.

The current WEP set a water conservation goal to reduce Utilities' customer use to 130 gallons per capita per day (GPCD)³ by 2030 and outlines five key areas of opportunity. Since then, staff have made significant progress within these areas, including:

- leveraging meter technology to provide customers with leak alerts and a data portal to track their use
- sending monthly water use reports to all customers
- creating more education and opportunities to reduce outdoor use with irrigation equipment rebates, at-home sprinkler checkups, and water-efficient landscape conversion education and rebates
- adding new programs and incentives for commercial customers
- permitting graywater systems and increasing indoor fixture efficiency standards

In 2022, our programs saved an estimated 173 million gallons (531 acre-feet) of water. This is about 2.5% of Utilities' total treated water demand for 2022 (6.96 billion gallons or 21,359 acre-feet) and is more than double the average annual savings from conservation programs prior to 2018. A portion of estimated annual savings will persist into future years, such as savings from efficient toilet and landscape installations. Many other strategies, such as educational campaigns, and influences, like weather, generate water savings but are challenging to quantify and not included in annual water savings totals. In both 2021 and 2022⁴, water use was 139 GPCD, 6.5% above the current WEP goal.

WEP Helps Provide a Reliable Water Supply

Utilities uses a multi-faceted approach to ensure a reliable and flexible water supply now and in the future. The WEP is one of many tools used to manage a diverse portfolio of water rights and complexity of users and water demands. Historically, during average and wet precipitation years, these water rights provide more water than customers use. During hot and dry years, current supplies may not meet demands while also maintaining a stored reserve of water for emergencies.⁵ Furthermore, we anticipate a future where climate impacts and population growth increase demands and put pressure on Utilities to restrict water use.

³ Water consumption is often characterized by daily, per person use, measured in gallons per capita per day (GPCD), and is commonly used as an industry standard for benchmarking despite calculation methods that vary. Utilities calculates GPCD by taking the total annual treated water demand (excluding large contractual customers) and dividing by the service area population.

⁴ Utilities will publish the 2023 Water Conservation Annual Report in the first quarter of 2024. Due to a 123% increase in precipitation during 2023's irrigation season (compared to 5-year average) total treated water demand was approximately 15% less than projected for the year and per capita water use for 2023 is estimated at 132 GPCD.

⁵ Section 2.1.3 of the City of Fort Collins Water Supply and Demand Management Policy states the water supply planning criteria will include a storage reserve that equates to 20% of annual demand in storage through a 1-in-50-year drought. This is meant to address emergency situations like pipeline failures or wildfire impacts. The reserve equates to about 3.7 months of average winter demand and about 1.5 months of average summer demand.

The approach and tools include:

- **Planning and modeling:** Population growth and climate trends are used to generate water demand forecasts. These demand forecasts inform the 2019 Utilities [Water Supply Vulnerability Study](#)⁶ and strategic plans such as the WEP, Water Supply and Demand Management Policy, and Water Shortage Action Plan. A new demand model is being developed as part of this WEP update.
- **Water supply storage:** Storage infrastructure is critical to reliably save and deliver water. In addition to the storage available in Joe Wright Reservoir, the 8,200 acre-feet (2.7 billion gallons) enlargement of Halligan Reservoir through the Halligan Water Supply Project is essential for Utilities to meet projected future demands without frequent water shortages and corresponding restrictions.
- **Conservation and efficiency:** A suite of strategies guided by the WEP allows us to do more with the supplies we have and, in the long-term, has the potential to minimize the frequency and severity of future water shortages and corresponding restrictions.

WEP Minimizes Future Risks

The [Water Supply Vulnerability Study](#) (see footnote 7 and City Council Work Session on 3/24/2020) identified key risks to Utilities' water resources:

- A warmer/drier climate poses the largest risk.
- Reductions in Colorado-Big Thompson supplies would have significant impacts.
- High water demands represent a significant vulnerability. It is important to implement conservation and efficiency efforts and track demand trends.
- Water storage is crucial. Without enlarging Halligan Reservoir, Utilities' current water supply planning criteria could not be met under most future climate and demand conditions. Also, water storage can help capture water saved from conservation and efficiency efforts.

The 2024 Colorado Climate Center's [Climate Change in Colorado](#)⁷ report documented a 2.3 degree Fahrenheit increase in the statewide annual average temperature from 1980-2022, and projects temperatures to rise an additional 1.0-4.0 degrees by 2050. For our region, the report notes slightly greater future warming.

The Water Supply Vulnerability Study indicates that even with storage in an enlarged Halligan Reservoir, a hotter, drier climate will require Utilities to impose water restrictions more frequently, based on projected demand for 2065 population. Historically, Utilities has imposed mandatory water restrictions at a frequency of 1-in-10 years in response to projected shortages from drought. Even if the Halligan Reservoir enlargement is completed and precipitation amounts do not change relative to today, the Water Supply Vulnerability Study projects that the need for mandatory restrictions would increase to about 3-in-10 years with a 5 degree temperature increase. Other factors such as reduced precipitation, higher than anticipated population increase or less focus on water conservation strategies would produce even greater frequency and severity of water shortages and restrictions. Implementing thoughtful and thorough water conservation and efficiency strategies can minimize the frequency and severity of water shortages and restrictions while providing all customers the opportunity to participate in conservation programs to reduce their bills and be more resilient to future shortages.

⁶ Available online at fcgov.com/utilities/img/site_specific/uploads/wsvs-final-report.pdf.

⁷ Available online at climatechange.colostate.edu.

NEXT STEPS

Anticipated next steps in February to December 2024:

- Conduct engagement
- Complete modeling
- Conduct equity analyses
- Prioritize strategies
- Q3 2024: Share results at a Council Work Session and with relevant Boards and Commissions
- Complete remaining work to finalize decisions and prepare plan
- Q4 2024: Seek Board and Commissions' recommendations and Council approval, then submit to Colorado Water Conservation Board
- 2025-2032: Implement prioritized water conservation strategies, which may include seeking additional resources including funding, training, and additional staff
- 2032: Next State required WEP update submittal

ATTACHMENTS

1. 2015 Water Efficiency Plan
2. Water Efficiency Plan Guiding Principles
3. 2022 Water Conservation Annual Report
4. Presentation

COPY



2-13-2024

Fort Collins Utilities Water Efficiency Plan (WEP)

City Council Work Session

Marief Miller
Water Conservation Manager

Alice Conovitz
Water Conservation Specialist



Questions for Council

1. What is Council's vision for the WEP and how it addresses water conservation and efficiency?
2. What does Council need to know from our engagement, equity analysis, and water demand modeling efforts?

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City of
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Background

Creating a Reliable Water Supply



1. Planning and modeling

- Water Supply and Demand Management Policy
- Water Supply Vulnerability Study

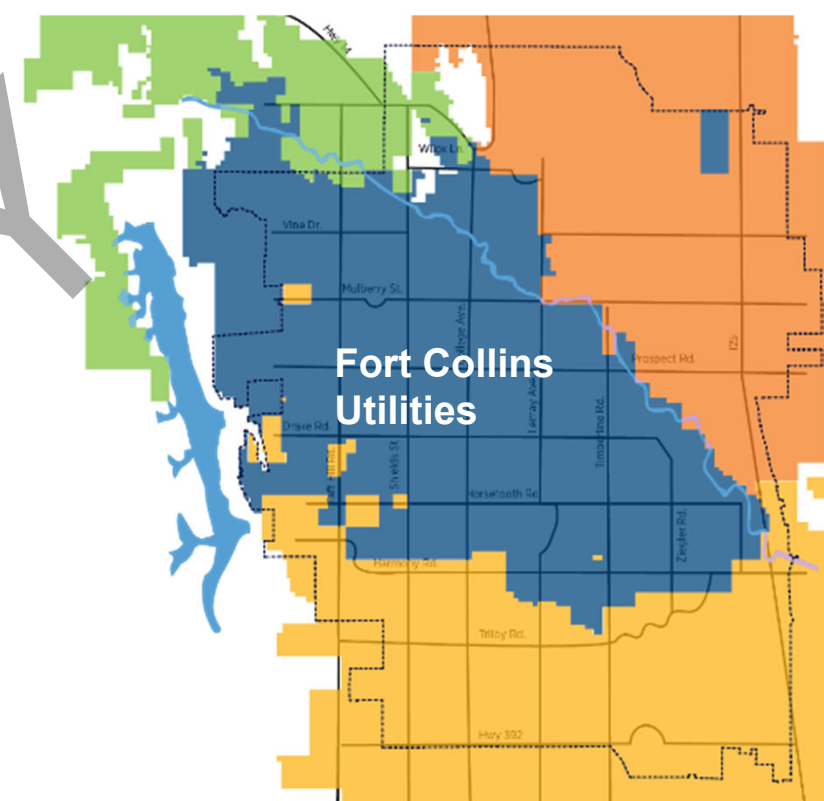
2. Water supply storage

- Halligan Reservoir enlargement

3. Conservation and efficiency (demand management)

- WEP
- Water Shortage Action Plan

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- Fort Collins Utilities
- West Fort Collins Water District
- ELCO Water District
- Fort Collins-Loveland Water District

Continued collaboration with neighboring water providers

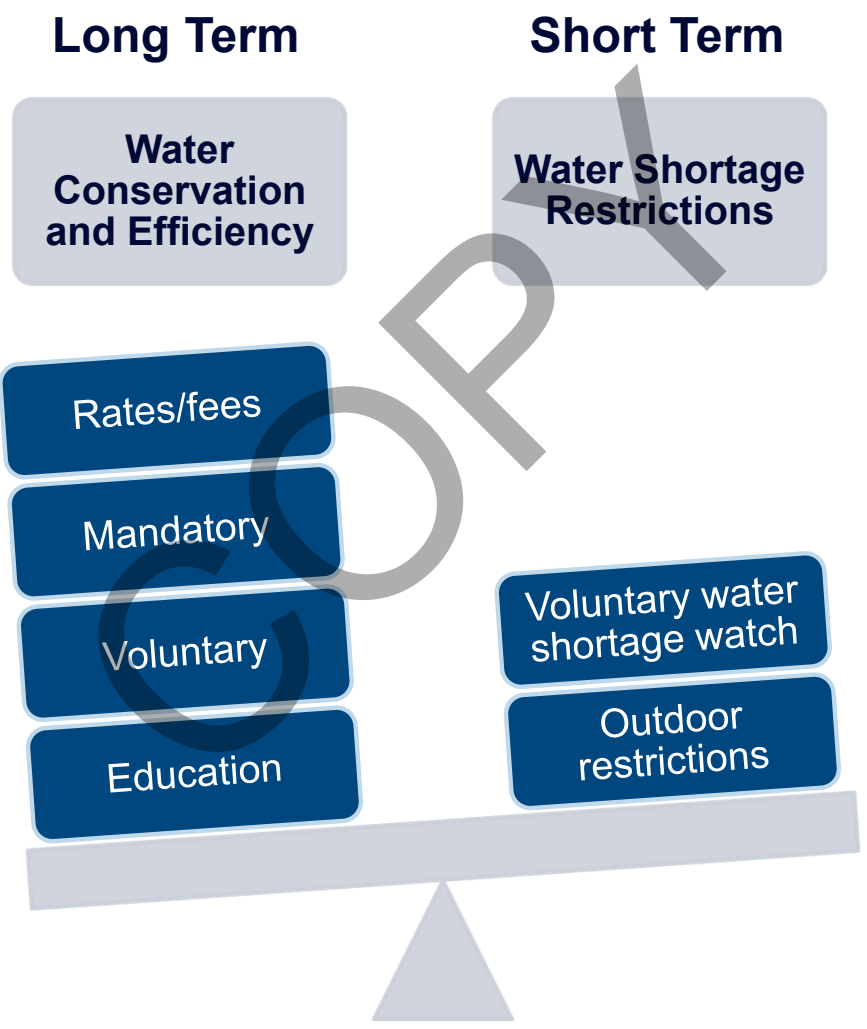
Many Ways to Manage Demands

Pros

- Resiliency
- Conservation behaviors
- Water literacy
- Flexibility

Cons

- Requires mandatory efforts to go beyond low-hanging fruit
- Requires ongoing resources
- Takes years to see accumulated savings



Pros

- Fast-acting
- Can achieve deep reductions

Cons

- Living infrastructure
- Business
- Time
- Water revenue
- Little flexibility

Water Supply: Risks and Solutions



Warmer, drier climate poses largest risk



Potential reduction in Colorado-Big Thompson poses risk



Adequate storage is crucial to meet future water demands



Managing demands is crucial to minimize water restrictions

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Water Supply: Risks



Warmer, drier climate poses largest risk

- Historical restrictions
 - **1-in-10 years**
- 2065 predictions without Halligan
 - **9-in-10 years**
- Even with Halligan, climate change will drive more frequent restrictions
 - **6-in-10 years:**
 - temperature ↑ 5°
 - precipitation ↓ -5%
 - **3-in-10 years:**
 - temperature ↑ 5°
 - precipitation no change



Potential reduction in Colorado-Big Thompson poses risk

- No reductions currently planned
- Ongoing challenge
- Solutions: more demand management and Halligan Reservoir enlargement

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Water Supply: Solutions



Adequate storage to meet future water demands

Halligan

- Increase storage
 - Would store 2.7 billion gallons (~8,200 AF)
 - 39% of current annual demand
- Prepare for future demand
- Drought resilience
- 16x more than 2022’s annual water conservation program savings



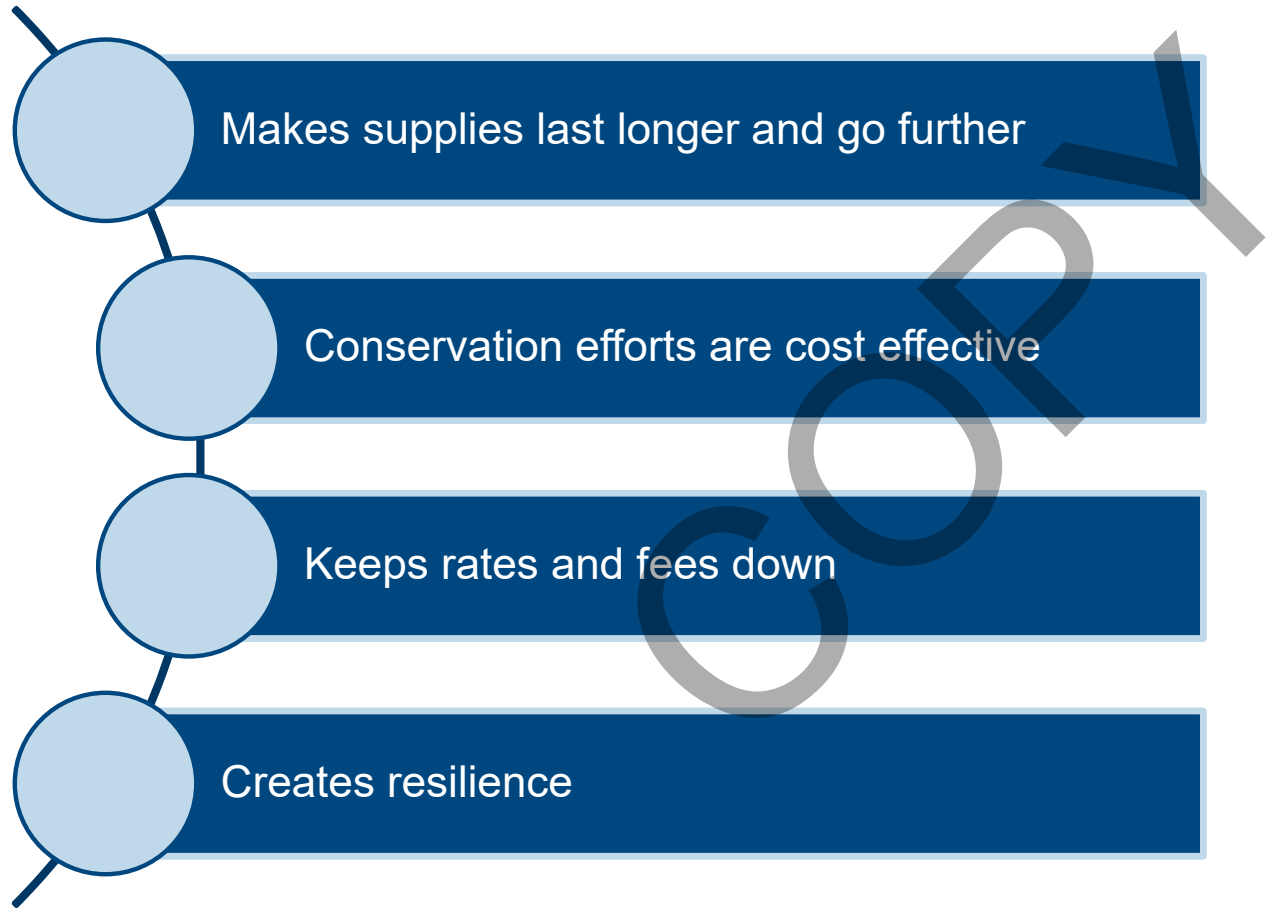
Using conservation and efficiency strategies to minimize water restrictions

WEP

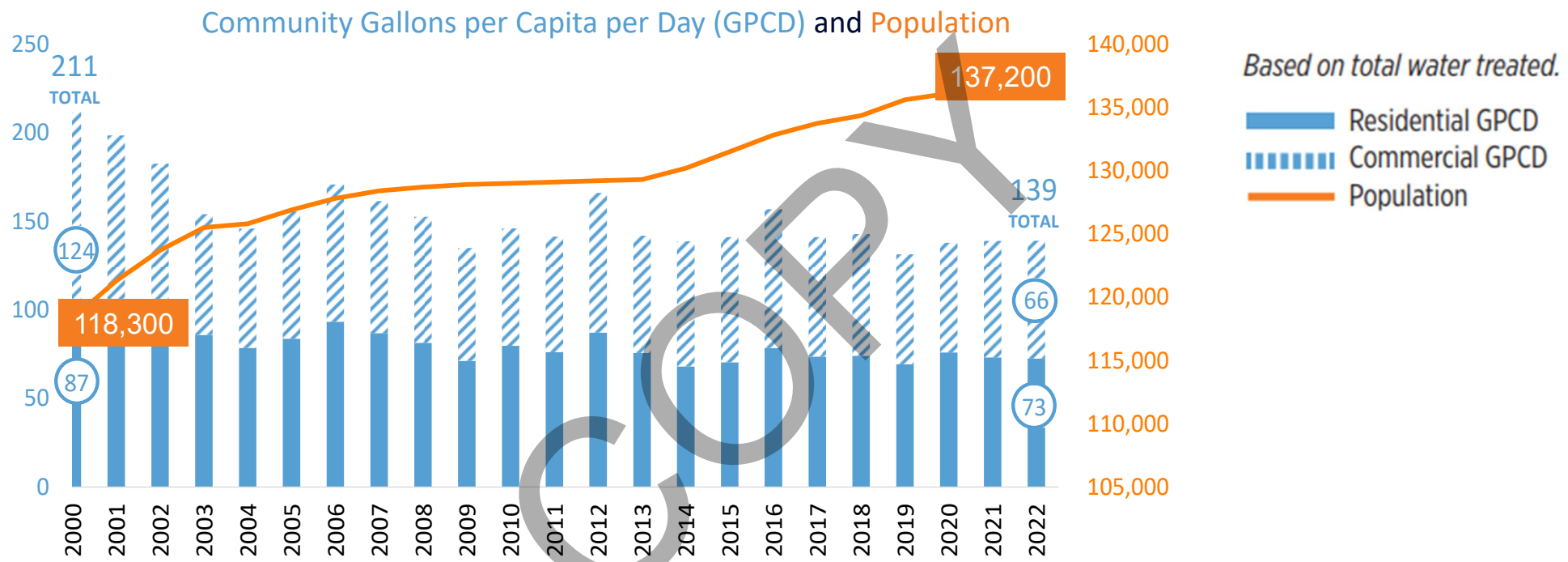
- Water conservation activities
 - Saved 173 million gallons (531 AF) in 2022
 - 2.5% of current annual demand
- Reduced per capita use by 34% over the last two decades

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Why Water Conservation and Efficiency?



Current WEP Goal: 130 GPCD by 2030



Water conservation works

- 16% increase in population
- 34% decrease in GPCD

Current WEP goal: 130 GPCD by 2030

- 5-year average (2018-2022) = 138 GPCD
- 2023 preliminary result = 132 GPCD
 - Precip was 123% more during irrigation season compared to average (2018-2022)



City of
Fort Collins

WEP Update

Creating an informed future state

WEP Purpose and Content

	Guide	Guide Water Conservation, Utilities and City on water demand management
	Set	Set water use reduction goals
	Identify	Identify conservation and efficiency strategies (roadmap to goals)

What's a WEP?

- State requirement
- Planning document with a seven-year cadence
- Developed with extensive community input
- fcgov.com/WEP

It does not...

- Create standards or regulations without additional process
- Apply to temporary water shortages
- Apply to areas outside of Utilities' water service area

Looking for Answers and Solutions: WEP Update



Re-evaluate goals and metrics (130 GPCD by 2030)

- Consider future demand, vulnerabilities, climate, growth, attainability

Identify and prioritize demand management strategies (incentives, standards, codes)

- Evaluate based on water savings, engagement, equity, cost, resources, feasibility

Quantitative demand model

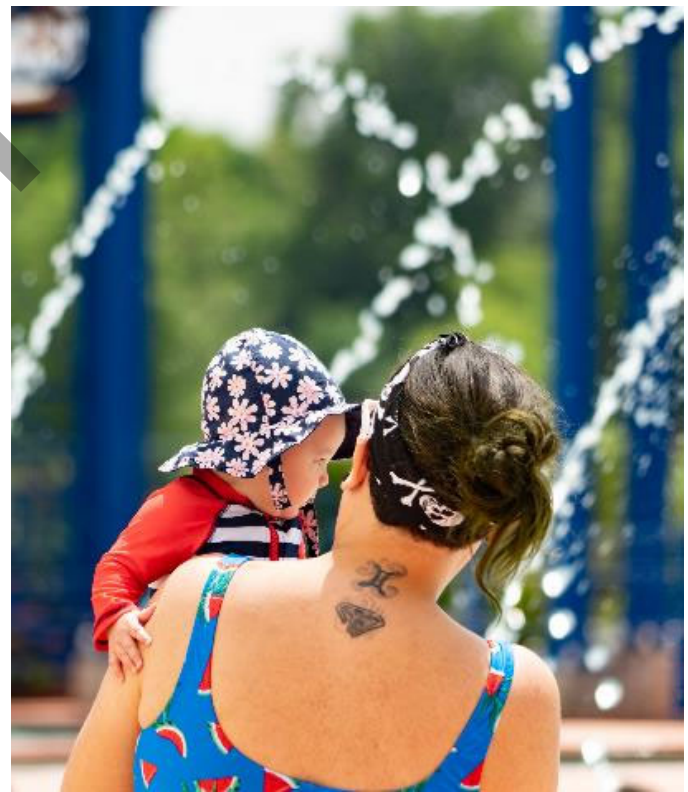
- Model water savings from demand management strategies under different climate and growth scenarios

Engagement and equity analyses

- Inclusive public engagement
- Analyze for equitable outcomes and identify/resolve gaps

One Water integrated water management

- Cross-departmental engagement
- Emphasis on land use planning
- Utilize OCF framework and make progress on Big Move #3



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Key Tasks



Broad Engagement

Outreach to marginalized community members: identify motivations/barriers to conservation

- Four Community Consultants
- Focus groups/open houses
- City resources: Equity Office, Climate Equity Committee

Broad engagement throughout community: align conservation with culture and values

- Online platform: ourcity.fcgov.com/wep
- Movie theater ad with survey link
- Key Accounts, business community
- Landscape professionals
- Environmental and community organizations
- Other ads, emails, social media posts, events, meetings
- Synthesize and incorporate past engagement / survey responses from related efforts

City staff and leadership engagement: organizational water use goals and strategy priorities

- Facilitated meetings with City departments
- City Council work sessions (Q3); WEP first reading (Q4 2024)
- Water Commission, Natural Resources Advisory Board (Q3)
- Super Issues meeting (Dec. 2023)

What Success Might Look Like

- More informed planning decisions
- Minimize frequency and severity of water shortages
- More equitable and resilient outcomes for all
- Better utilization of resources



Questions for Council

1. What is Council's vision for the WEP and how it addresses water conservation and efficiency?
2. What does Council need to know from our engagement, equity analysis, and water demand modeling efforts?

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Thank you!

ourcity.fcgov.com/WEP

Item 3.



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WORK SESSION MEMORANDUM

Date: February 19, 2024
To: Mayor and City Councilmembers
Through: Kelly DiMartino, City Manager
Tyler Marr, Deputy City Manager/Interim Utilities Executive Director
From: Alice Conovitz, Utilities Water Conservation Specialist
Mariel Miller, Utilities Water Conservation Manager
Subject: February 13, 2024, Work Session Summary: 2024 Water Efficiency Plan Status

BOTTOM LINE

The purpose of this memo is to document the summary of discussions during the February 13, 2024, Work Session. All Councilmembers were present (Councilmember Ohlson attended remotely). Staff members present were Mariel Miller, Alice Conovitz, and Gretchen Stanford. Staff member Donnie Dustin attended remotely.

The purpose of this item was to describe the state-mandated Fort Collins Utilities (Utilities) Water Efficiency Plan (WEP) and the 2024 update process. The updated WEP will set conservation goals, incorporate extensive public engagement focusing on marginalized community members, and employ numeric modeling and an equity analysis to help prioritize future water conservation and efficiency strategies. Potential strategies include rate structures, education, voluntary incentives, regulations, and standards. The staff presentation and Agenda Item Summary also provided background on water conservation and efficiency and Utilities' work to manage water demand to provide a reliable water supply. Staff sought input from Council on the following two questions:

- 1. What is Council's vision for the Water Efficiency Plan and how it addresses water conservation and efficiency?
2. What does Council need to know from our engagement, equity, analysis, and water demand modeling efforts?

DISCUSSION SUMMARY

Council provided feedback and comments, including the following (Council-requested follow-up items are listed separately):



- Providing input on a plan that doesn't extend to all of Fort Collins, but only to the Utilities Water Service Area is challenging. Council asked about neighboring water providers' WEPs and whether they were available to review. Generally, these can be found online either through the Colorado Water Conservation Board or the specific water providers' websites.
- Better understanding of water use based on housing type is helpful for understanding and making development decisions.
- Utilities is pursuing multiple strategies, especially adequate water storage and conservation/efficiency, to prepare for climate change and its impacts.
- It would be helpful to know how we're doing, and to inform the development of future goals, if we could easily compare Fort Collins Utilities water service area's water use to other communities or had some sort of benchmark. Staff responded that we could provide some examples, and acknowledged that gallons per capita, per day (GPCD) is a challenging metric to use for comparisons because it is not measured consistently amongst water providers. GPCD metrics for residential and commercial uses can also be challenging to understand and compare.
- The total estimated annual water savings in 2022 seems small, at about 2.5% of our total treated water. However, staff clarified that this volume includes the savings from about only 16 programs and services that are quantifiable – the Water Conservation Department also implements activities such as education that likely provide water savings but are challenging to measure. The annual savings estimation is also not cumulative, but only a snapshot of new savings initiated each year. Many programs, such as converting to a water-wise landscape, have ongoing year-after-year savings that are not included in the annual savings estimate.
- Staff responded to other questions that were asked about working with school-aged children, businesses, the volume of Halligan Reservoir and location of additional Utilities water storage.
- Council liked the community-outreach approach, but questions how staff will reach marginalized community members in a meaningful way given challenges and over-surveying concerns. Staff will emphasize listening and will work with contracted equity consultants, experienced internal staff, and compensated community consultants who are well connected to various groups in the community and can tailor the engagement to what works best for a particular group.
- Utilities' current tiered pricing structure could be re-evaluated as a conservation strategy.
- When prioritizing strategies and weighing decisions, it is helpful to understand the impact on equity and potential benefits, similar to how Our Climate Future evaluates next moves.
- Council asked about what prompted the work and when it will be complete. Staff responded that the plan is state-mandated and is required to be updated every seven years, with an estimated completion date of Dec. 2024. A plan with a clearer path forward that includes updated goals and prioritized strategies is needed for Utilities and Water Conservation staff to address future risks such as climate change more strategically.
- Concerns regarding impacts to revenue were shared and are being addressed by staff; however, the revenue impact is minimized by the base rate and could be further

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addressed through adjustments to the current tiered rate pricing structure to limit impacts to low water users.

- One councilmember mentioned a vision for the WEP to be comfortable, but ambitious, in setting goals and identifying strategies.

NEXT STEPS

Staff will respond to the follow-up items listed below in a separate memo expected in March. Other next steps include continuing engagement activities with the public and other staff to inform the WEP planning process through Q3 2024 and finalizing the water demand estimation model. A second work session is currently planned with Council for July 9, 2024, to provide an update on the planning process and seek further direction.

FOLLOW-UP ITEMS

The following items, requested by Council, will be addressed in a separate follow-up memo:

- Per unit water use (indoor and outdoor) by housing type
- Neighboring water providers' WEPs
- Comparisons to other communities' GCPD, separating residential and commercial, where feasible; and evaluate why there are differences, to better understand and learn from others who are doing it well.
- Utilities water rate comparisons across various customer types, to evaluate industry rates.
- Water savings associated with xeriscape standards.



CC: Gretchen Stanford, Utilities Deputy Director Customer Connection




WORK SESSION MEMORANDUM

Date: March 25, 2024

To: Mayor and City Councilmembers

Through: Kelly DiMartino, City Manager 
 Tyler Marr, Deputy City Manager/Interim Utilities Executive Director 
 Gretchen Stanford, Utilities Deputy Director Customer Connections 

From: Alice Conovitz, Utilities Water Conservation Specialist 
 Mariel Miller, Utilities Water Conservation Manager 

Subject: Follow-up to Feb. 13, 2024 Work Session: 2024 Water Efficiency Plan Status

BOTTOM LINE

The purpose of this memo is to provide follow-up information in response to questions raised during the Feb. 13, 2024 Work Session on the 2024 Water Efficiency Plan (WEP). All Councilmembers were present with Councilmember Ohlson attending remotely. A summary of the discussion was documented in a Work Session Memorandum dated Feb. 19, 2024 with subject line, "February 13, 2024 Work Session Summary: 2024 Water Efficiency Plan Status".

The purpose was to describe the state-mandated Fort Collins Utilities (Utilities) WEP and the 2024 update process. The 2024 WEP will set conservation goals, incorporate extensive public engagement focusing on marginalized community members, and employ numeric modeling and an equity analysis to help prioritize future water conservation and efficiency strategies. Potential strategies include rate structures, education, voluntary incentives, regulations, and standards. The staff presentation and Agenda Item Summary also provided background on water conservation and efficiency and Utilities' work to manage water demand to provide a reliable water supply.

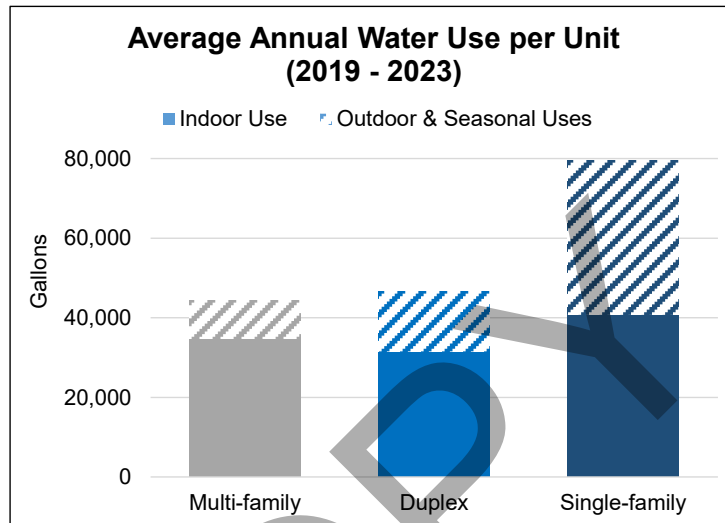
The following items, requested by Council, are addressed in this memo:

1. Per unit water residential water use by housing type.
2. Water Efficiency Plans for neighboring water providers.
3. Water use comparison to other communities.
4. Utilities water rate comparisons across customer types.
5. Water savings associated with xeriscape standards.

ITEM #1 – PER UNIT RESIDENTIAL WATER USE BY HOUSING TYPE

Average annual water use per unit is greatest for single-family customers, who used approximately 78,600 gallons per housing unit on average, as shown below on the plot. The amount of water use per unit is similar between duplex and multi-family customers, averaging approximately 46,300 gallons per unit and 44,400 gallons per unit, respectively. On an average per-unit basis, seasonal outdoor uses account for 49% of single-family residential water use, but

only 33% for duplex and 21% for multi-family residential customers. These patterns reflect the generally higher amount of irrigated outdoor landscapes associated with single-family and duplex residential accounts¹. Additionally, the average number of people per household (pph) varies across housing types, which primarily influences indoor use. We estimate the average occupancy per unit is 2.6 persons per household (pph) for single-family residential, 2.2 pph for duplex, and 1.6 pph for multi-family residential, based on analysis of 2021 U.S. Census Bureau data for the entire city of Fort Collins.



ITEM #2 – WATER EFFICIENCY PLANS FOR NEIGHBORING WATER PROVIDERS

Within the city of Fort Collins' growth management area, Utilities, East Larimer County (ELCO), and Fort Collins-Loveland Water District (FCLWD) each must submit water efficiency plans². The following bullets summarize key information about these plans:

- Utilities: Update is underway with intent to submit update to CWCB in late 2024. The current WEP was completed in 2015 and is available at <https://www.fcgov.com/WEP>
 - The current WEP sets a goal to reduce community-wide per capita water use to 130 gallons per capita per day by the year 2030; however, this goal is being re-evaluated.
- ELCO: The latest WEP was updated in 2016 and is available at https://dnrweblink.state.co.us/CWCB/0/edoc/202185/ELCO_WEPlanUpdate2017.pdf?searchid=1914c118-df55-45bf-a6c6-0c2e1ad3c877
 - ELCOS's WEP set a goal to reduce treated water demands by 740 acre-feet per year by 2035, as compared to predicted use based on passive water demand

1. For multi-family properties with large irrigated common areas, these may be billed at commercial rate codes. In 2023, annual water use was 21% lower than average for irrigation-only accounts, which includes commercial and residential common areas.

2. The Water Conservation Act of 2004 (HB04-1365) requires all retail water providers that sell 2,000 acre-feet or more annually to have a state-approved water efficiency plan.

management.

- FCLWD: The latest WEP was submitted in 2023 and is available at <https://fclwd.com/wp-content/uploads/2023/07/FCLWD-2023-Water-Efficiency-Plan-Update-for-Public-Review-1-1.pdf>
 - FCLWD's WEP set targeted water savings goals by customer class to lower the treated water demand by 10% over the ten-year planning period, or by approximately 1% per year.

Other water efficiency planning documents can be found on individual websites or the searchable water conservation plan database (<https://dnrweblink.state.co.us/CWCB/CustomSearch.aspx?SearchName=WaterConserverPlanSearch&cr=1>) hosted by the Colorado Water Conservation Board (CWCB), the state agency that reviews and approves WEPs.

ITEM #3 – WATER USE COMPARISON TO OTHER COMMUNITIES

Gallons per capital per day (GPCD) is a common metric used by water providers to evaluate water use independent of population growth. The calculation is typically done annually and can measure total, residential or commercial GPCD. Annual GPCD is calculated as: *volume of annual water demand, divided by population served, divided by number of days in a year.*

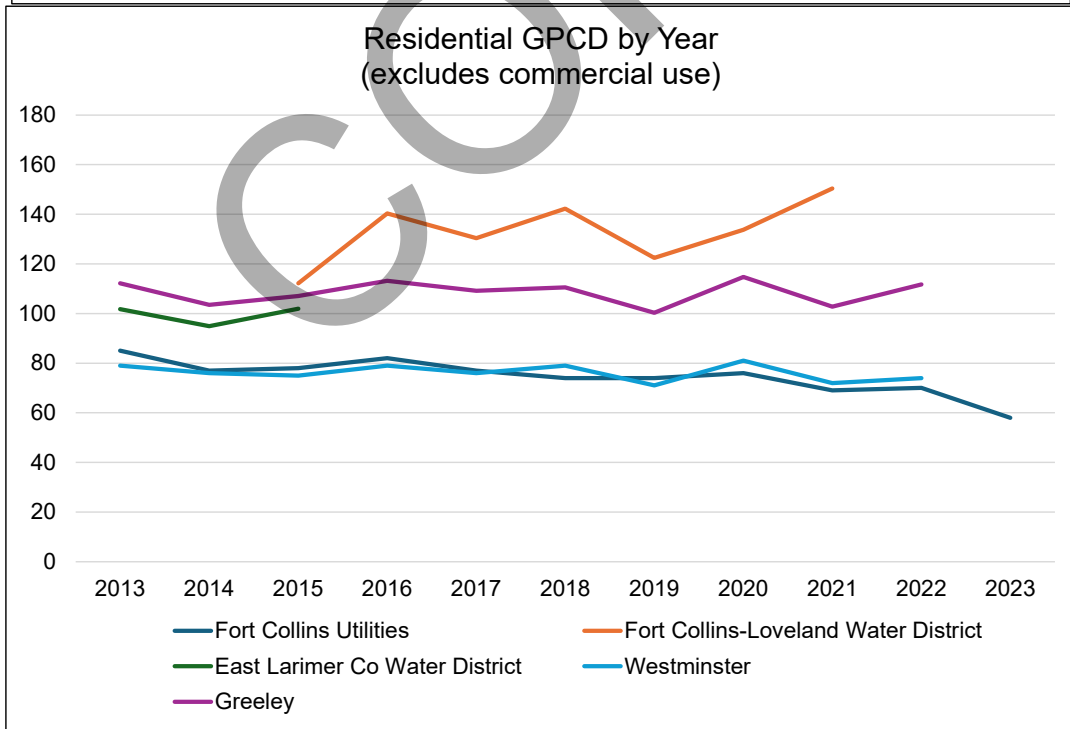
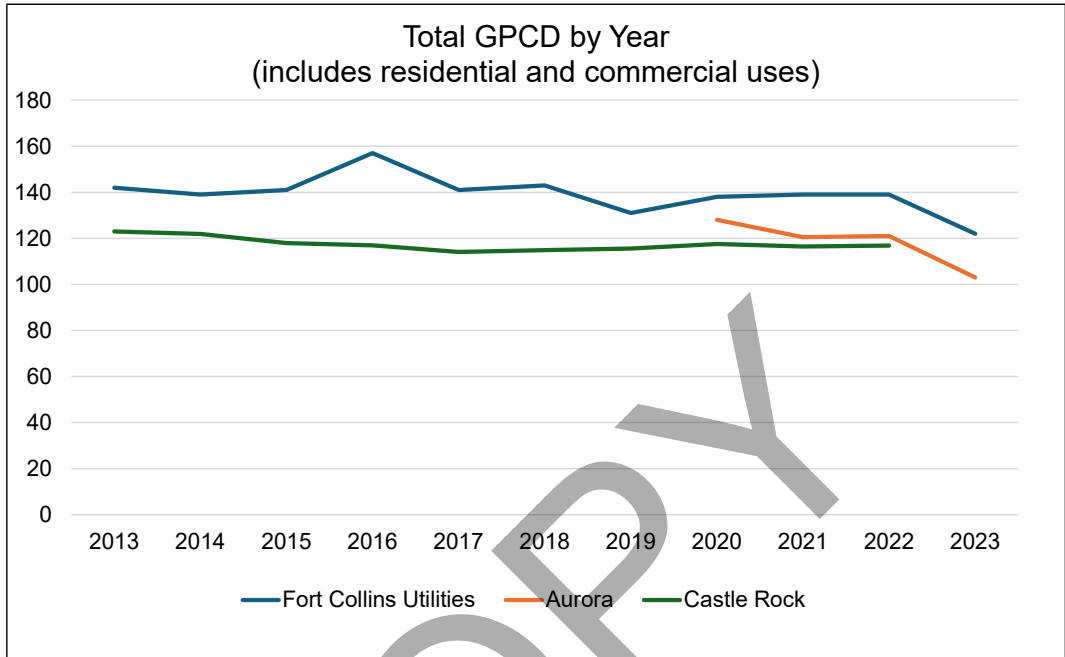
GPCD is not typically weather-normalized, which means it will vary across years and climates. Even in areas with similar climates there is variability in the methodology used to calculate GPCD, making it challenging to use as a comparison tool between water providers. The variability or differences happen in the first two values of the equation – volume of water and population. Variations in how water providers define volume of water include total treated water, total billed consumption, total metered consumption, inclusion of untreated water, and inclusion/exclusion of large contractual deliveries to commercial customers. Population estimates can also vary based on data availability and population estimate methods. These inconsistencies all influence GPCD and should be considered when comparing GPCD between water providers. However, if using GPCD to compare, the best option is to use residential GPCD and highlight the differences in the data used.

The final estimation of Utilities' 2023 water demand is 122 GPCD (this is lower than the preliminary estimate presented at the Feb. 13, 2024 Council Work Session, which was initially estimated at 132 GPCD). This is a decrease of 12% from the 2022 demand of 139 GPCD. The drop in GPCD is due to a 123% increase in precipitation during irrigation months compared to prior years. Customers responded to the weather and reduced their outdoor use, but 2023's low GPCD is not likely to persist during drier or hotter years.

Staff researched others' historical GPCD from current WEPs and discussed GPCD in more depth with three other water providers who responded to a request for more information. A few providers we researched and contacted are using GPCD as a performance metric or goal in their WEPs and many consider it a poor tool for comparison purposes, especially when commercial use is included. Some providers were reluctant to provide their numbers. The plots below present GPCD for residential use (upper plot) for those water providers and years that residential-only data was available, and total use (lower plot; total GPCD includes both residential and commercial use) for those that did not have residential data available. (For total

Item 3.

GPCD, calculation variabilities include those described above, as well as the use of raw water, excluding large industrial water use from total GPCD and differences in the amount of commercial water use versus residential use – some communities have relatively very little commercial use.)



Item 3.

Staff recommends moving away from a GPCD goal in the updated WEP as a publicly facing metric, given its complexity and variability. It's likely Utilities would continue to track GPCD internally to monitor for trends. A better goal or performance metric may be volume of water treated and/or metered, or volume of water reduced over a given period. A simplified volume-based metric, such as a reduction in total water use or estimated water savings, would align better to predicted and estimated water savings from conservation and efficiency strategies, which are also expressed as volumes. A simplified metric would minimize public confusion about what GPCD means and its nuances.

ITEM #4 – UTILITIES WATER RATES COMPARISONS ACROSS CUSTOMER TYPES

Utilities is committed to delivering safe, reliable and competitively priced services for all customers. Single-family and duplex water rates have a base charge and three tiers, with increasing costs-per-gallon as use goes up. Multi-family residential and commercial customers have lower rates in winter. Commercial rates are based, in part, on tap size. Current Utilities' water rates for all customer types are available online at https://www.fcgov.com/utilities/img/site_specific/uploads/water-wastewater-and-stormwater-rates.pdf?1704235735.³

Utilities' residential water rates are similar to, or lower than, neighboring municipalities, as shown in the following table:

2024 Residential Average Monthly Utility Bill					
Utility	Electric	Water	Wastewater	Stormwater	Total
Fort Collins Utilities	\$ 88.41	\$ 53.04	\$ 37.04	\$ 23.09	\$ 201.58
Longmont	\$ 82.56	\$ 69.33	\$ 41.33	\$ 18.85	\$ 212.07
Loveland	\$ 89.76	\$ 61.16	\$ 43.04	\$ 24.88	\$ 218.84
Greeley	\$ 100.63	\$ 73.90	\$ 36.99	\$ 18.61	\$ 230.13
Colorado Springs	\$ 99.92	\$ 96.95	\$ 30.53	n/a	\$ 227.40
Boulder	\$ 100.63	\$ 66.72	\$ 48.43	\$ 27.10	\$ 242.89
ELCO	n/a	\$ 58.24	n/a	n/a	n/a
FCLWD	n/a	\$ 61.93	n/a	n/a	n/a

ITEM #5 – WATER SAVINGS ASSOCIATED WITH XERISCAPE STANDARDS

A well-managed landscape built with xeriscape principles – one of which is limiting turf – can yield significant water savings when compared to typical turf-heavy landscapes. Water use data for participants in the Utilities Xeriscape Incentive Program (XIP) show that limiting high-water turf reduced water use by an average of seven gallons per square foot per year for areas converted from turfgrass to xeriscape, or about 60% less water.

³ Detailed water rate information for FCLWD is available online at <https://fclwd.com/support/rates-and-fees/>. ELCO's water rates are available at <https://www.elcower.com/rate-information>.

Turf replacement programs like XIP and development landscape standards reduce current and future water demands. Staff scheduled a hearing in May 2024 for code changes that propose new standards that prioritize water-wise landscapes. If adopted, these new standards would apply to commercial and multi-family development and redevelopment, which include large common areas like those maintained by homeowners' associations. To reduce outdoor water demand, staff will propose that no more than 30% of the total landscaped area (not to exceed 10,000 square feet) in new and redeveloped commercial and multi-family properties be planted with high-water turfgrass species.

Using the criteria of the proposed standard, staff analyzed property and water use data, and several development scenario assumptions. Staff estimate the proposed standard would save at least 53 million gallons annually on multi-family properties alone at GMA build-out compared to no turf limitations. If adopted, the portion of water savings associated with new and redevelopment in the Utilities water service area could help make progress towards a future WEP goal.

Given the variability of business types and unpredictability of future development trends, non-residential commercial property water reduction estimates are more difficult to capture and therefore were not included. It is assumed that if the new standards are adopted, commercial landscapes would achieve a 60% reduction in future water use compared to water use trends seen with current landscapes. The Urban Landscape Conservation Task Force reiterates this challenge in their final report published in Jan. 2024, pointing out the many factors that make predicting water savings for regulations so difficult. Regardless, there is consensus amongst task force and water conservation professionals state and national that one effective way to reduce water use is to reduce new turf installation.⁴ City staff anticipate the water demand model that is being developed for the WEP update to be able to provide more comprehensive water demand estimates for this and other strategies.

NEXT STEPS

Staff will continue to work on the WEP update. Ongoing and upcoming actions include continuing engagement activities with the public and staff to inform the planning process and finalizing the water demand estimation model. A second Council Work Session is currently planned for July 9, 2024, to provide an update on the planning process and seek further direction.

Attachments:

1. Work Session Memorandum: February 13, 2024 Work Session Summary: 2024 Water Efficiency Plan Status
2. Work Session Agenda Item Summary: 2024 Water Efficiency Plan Status
3. 2024 Urban Landscape Conservation Task Force Final Report

CC: Gretchen Stanford, Utilities Deputy Director Customer Connections

⁴ 2024 Urban Landscape Conservation Task Force Final Report

2023

WATER CONSERVATION ANNUAL REPORT

Fort Collins Utilities has a strong commitment to ensuring the efficient and responsible use of our natural resources. Our Water Conservation Program started in 1977 and we continue to innovate how we help the community use water wisely.



Gallons per capita per day (GPCD) is the total treated water used by commercial and residential customers, divided by the service area population (about 80% of Fort Collins), divided by 365 days. GPCD helps determine if conservation and efficiency efforts

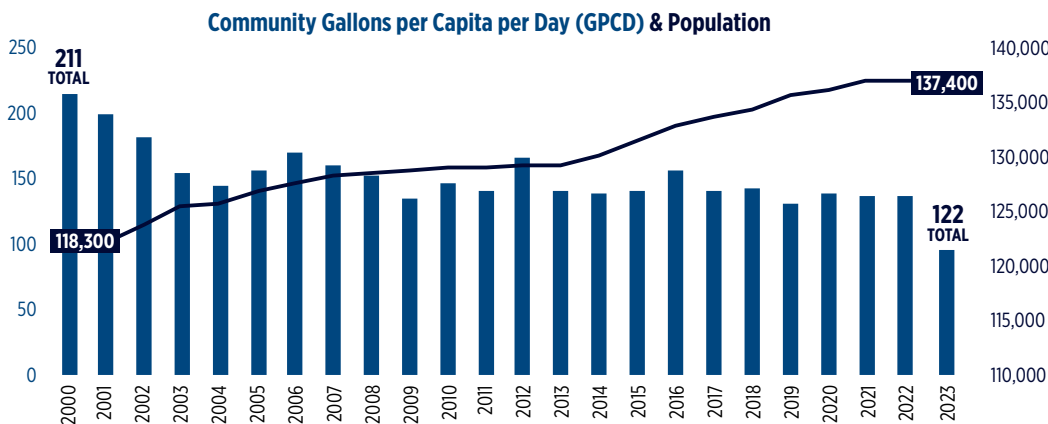
and practices are impacting community water use, irrespective of population growth. GPCD fluctuates greatly with weather – hotter and drier months during the irrigation season create higher water demands for our community.

WATER CONSERVATION AND EFFICIENCY AT A GLANCE

GPCD is down 42% since 2000.

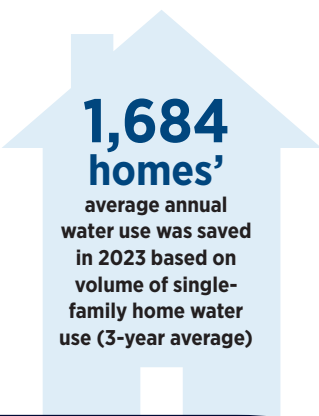
Based on total water treated.

- Total Community GPCD
- Population

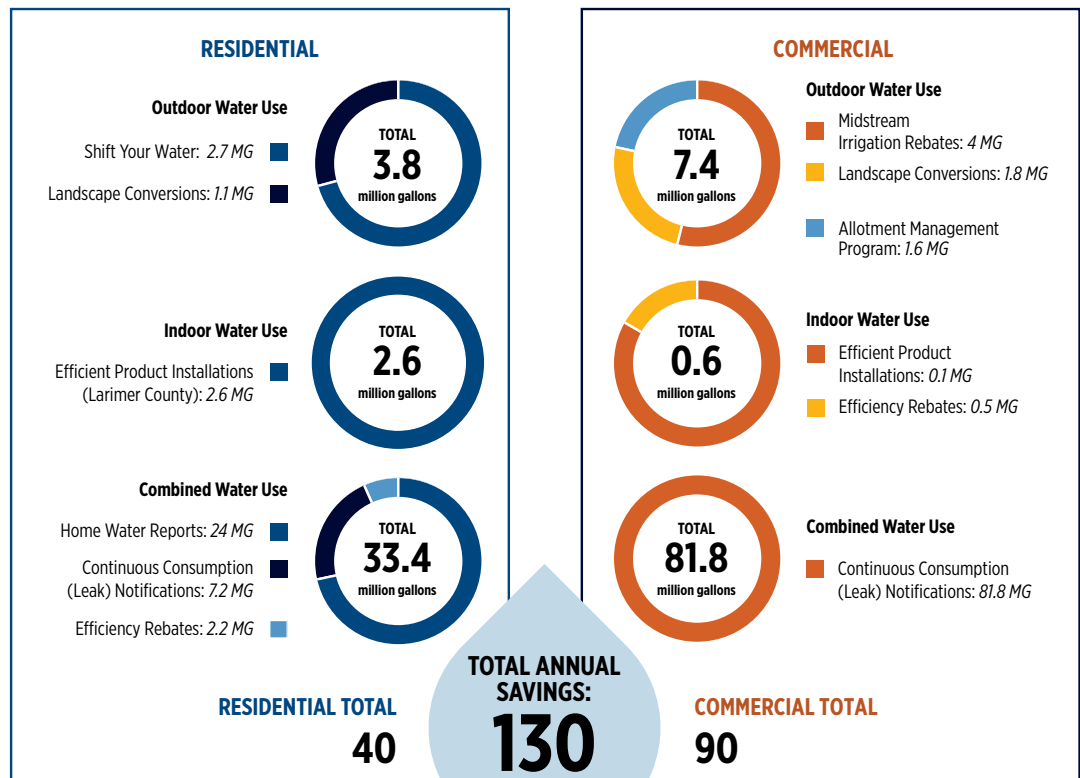


WATER SAVINGS

Actions in 2023 resulted in approximately **130 million gallons (MG)** saved or 2% of 2023 total treated water.



PROGRAMS AND SERVICES

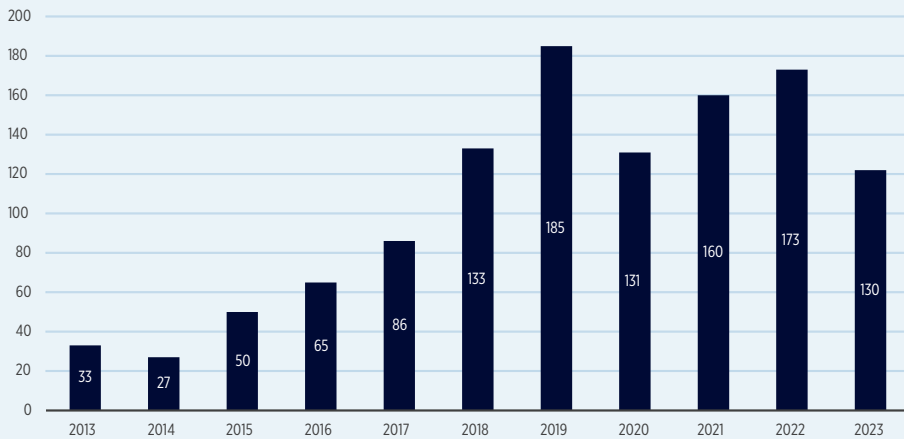


LEARN MORE

Residential Programs and Rebates: fcgov.com/save-water

Commercial Programs and Rebates: fcgov.com/water-efficiency

Estimated Water Savings (MG)



Another way to evaluate our impact on water use within our service area is estimated water savings.

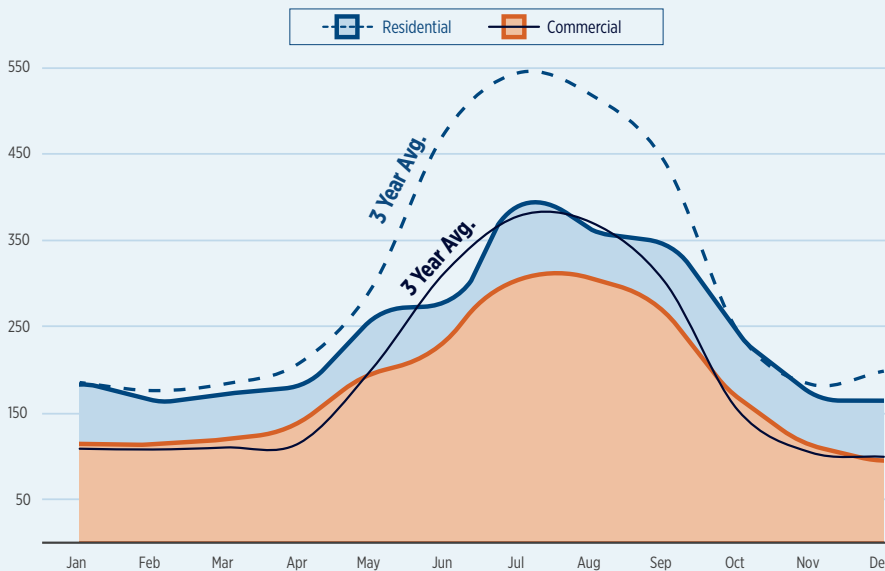
Estimated water savings only include results from programs and services that have measurable water savings, a large portion of which persist for years to come. Many of the services we provide can't be easily measured.

Compared to 3-year historical average (2020-2022), residential water use was down 20% and commercial water use was down 8%. This is largely due to a 123% increase in precipitation during the irrigation season in 2023 compared to prior years' average.

Overall, Utilities treated 6.1 billion gallons of water (including unmetered use and other water losses), which

equals 122 gallons per person per day (GPCD). This is a 42% reduction in GPCD since 2000 and meets our goal of reaching 130 GPCD by 2030. However, 2023's record rainfall and wet, cool irrigation season played a large role and reduced total treated water use by about 13%. If we receive less rain in summer of 2024, it is likely that GPCD will increase.

Total Monthly Water Use (MG)



RESIDENTIAL

- Total accounts: 32,204**
 - 28,872 single family & duplex accounts
 - 2,332 multi-family building accounts
- Total water use: 2,910,000,000 gallons**
- Average use per customer class:**
 - SF/Duplex: 64,384 gal/yr
 - MF: 423,305 gal/yr (includes multiple units)

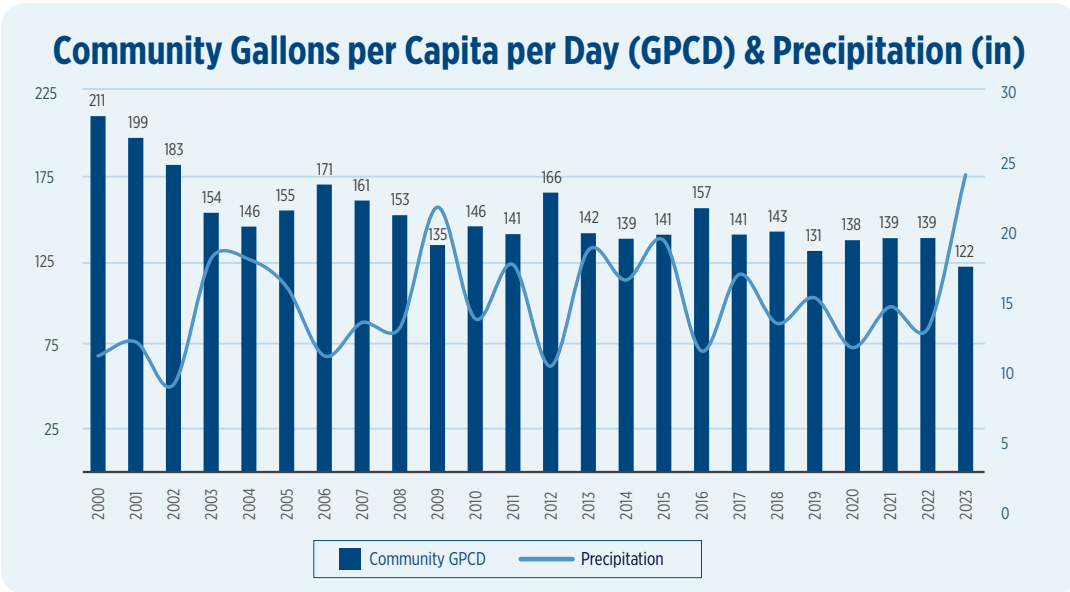
COMMERICAL

- Total accounts: 2,818**
 - Includes commercial, irrigation, and HOA customers
- Total water use: 2,193,000,000 gallons**
- Average use per customer account: 778,380 gal/yr**

Water use is constantly fluctuating – both our individual uses and our community use. There are many factors that impact how much water we use, but year-to-year fluctuations are mostly attributed to weather. Long-term water reduction trends generally result from efficient actions by water users. When we have cooler and wetter weather, our water use decreases, as seen in 2023. 2023’s record precipitation during irrigation season is not likely to start a trend. Our region is expected to continue warming and may receive less precipitation over time due to climate change. Hotter and drier weather makes water efficiency an even more critical strategy to managing a reliable water supply.

- **The Colorado Climate Center’s 2024 Climate Change in Colorado** reports a 2.3 degree F increase statewide since 1980 and estimates another 1-4 degree F increase by 2050. Summer and fall are projected to warm slightly more than winter and spring, extending the irrigation season into the fall. The future of Colorado’s precipitation is much less clear. Additional warming will drive greater evaporative demand, which influences the amount of water needed by plants to stay healthy. Therefore, warmer temperatures will likely contribute to more frequent and severe droughts, regardless of changes in precipitation.

- **The 2019 Water Supply Vulnerability Study** estimates climate impacts will decrease water supplies and increase water demands, squeezing water resources from both ends. This will likely increase the need for outdoor watering restrictions.

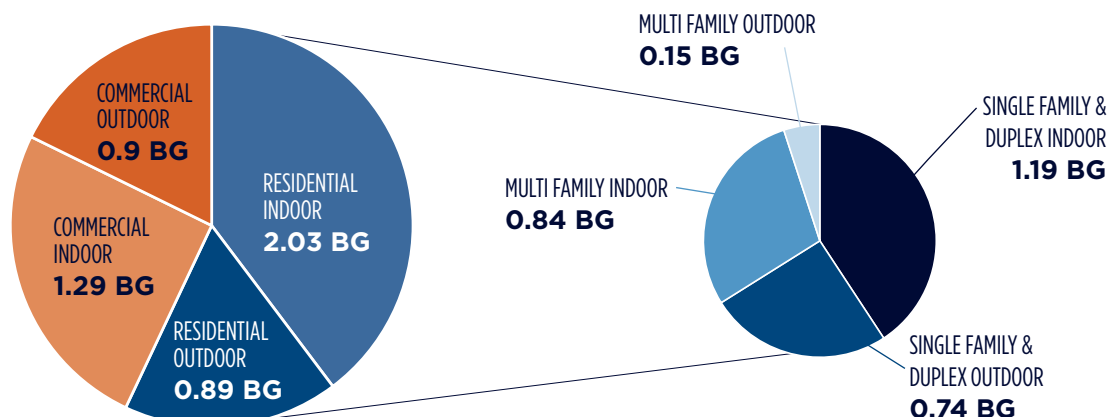


OTHER FACTORS THAT INFLUENCE WATER USE INCLUDE:

- **Conservation:** Actions such as taking shorter showers, monitoring your outdoor water use, turning off the faucet while brushing your teeth and other behaviors add up and can make a collective difference.
- **Efficient Fixtures/Appliance/Landscapes:** Homes and businesses that have water efficient appliances, fixtures, irrigation, and technologies use less water every time someone flushes, washes, showers, or waters their landscape.
- **Leaks:** The average household in the US wastes 10,000 gallons of water due to leaks every year, which is about 12% of total average annual household water use. 10% of homes have leaks that waste 90 gallons or more per day.
- **Population:** More people means more water use. Total residential and commercial water use all increase with a growing population.
- **Land Development Patterns and Urban Design:** Less dense developments with more landscaped areas require more outdoor water use to maintain. Landscape types that are not regionally adapted or native to our area, such as turf grasses and others, require more water than nature provides.

OUTDOOR WATER USE (COMMERCIAL + RESIDENTIAL) IS 35% OR 1.78 BG.

BG = Billion Gallons



2023 WATER CONSERVATION HIGHLIGHTS

- **Assisted Mobile Home Park Residents:** Supported Neighborhood Services' Mobile Home Park DIY series to educate residents on water and energy efficiency. Water Conservation attended four sessions to support about 90 residents with indoor and outdoor water conservation via free, efficient fixtures and promoting our programs and resources.
- **Provided free Certified Landscape and Irrigation Audit training:** Hosted a two-day Irrigation Association class, taught by Water Conservation staff, where 23 participants learned to analyze landscape water use and increase irrigation efficiency.
- **Sprinkler Checkup Program:** Conducted 412 checkups across Utilities, Fort Collins-Loveland, and East Larimer County water districts. Four trained technicians assessed over 2 million square feet of irrigated landscapes, inspected over 11,000 sprinkler heads, and piloted our first Spanish-language checkups and informational materials. In 2024, Utilities will provide checkups through a partnership with Resource Central, ensuring the program's continuity and allowing time for staff to explore future improvements. fcgov.com/sprinklers
- **Distributed Water-Wise Pre-Designed Plant Pallets:** Partnered with Nature in the City and Resource Central to distribute \$25 discounts on mostly native Garden in a Box kits to 170 residential water customers and \$100 discounts on Garden in a Box kits to 25 Income-Qualified Assistance Program customers and mobile home park residents. fcgov.com/GIAB.
- **Supported Affordable Housing:** Partnered with an affordable housing provider to install 144 high-efficiency toilets. Provided a rebate to support the project which otherwise would not have been financially feasible. This upgrade is estimated to save about 250,000 gallons annually. fcgov.com/water-efficiency.

2024 FOCUS AREAS

- **Water Efficiency Plan:** Updating the [2015 Water Efficiency Plan](#), which guides how Utilities customers use water and recommends strategies to help use less. The updated WEP will set new water conservation goals, incorporate extensive public engagement, integrate land use planning, and employ numeric modeling and an equity analysis to help prioritize future water conservation programs, policies, and incentives. Learn more about the WEP update and provide feedback at fcgov.com/2024WEP.
 - **Colorado River Impacts and Water Shortage:** Utilities staff monitors the Colorado River's status and ongoing discussions about water shortages impacting the seven states under the Colorado River Compact. Utilities sources about 60% of water distributed to customers from the Colorado River-Big Thompson project, which is stored in Horsetooth Reservoir and managed by [Northern Water](#). If there are reductions in water use required in Colorado, Northern Water would determine if, when and how much our Utilities supplies would be reduced. If needed, we will respond to shortages using the [Water Shortage Action Plan](#). As of now, there is no indication from Northern Water of the need for drought management action. fcgov.com/WSAP
 - **Landscape and Irrigation Training and Education:** Hosting free monthly garden tours by foot and bike, partnering with Natural Areas for a sustainable landscape series, and offering a class on efficient home irrigation. Emphasizing native plant landscaping education remains a priority due to its drought resilience and support for biodiversity and pollinators citywide. Utilities collaborates with numerous community organizations (One Canopy, Front Range Wild Ones, the CO Native Plant Society, People and Pollinators Action Network, the League of Women Voters, Nature in the City, USDA NRCS, Wildland Restoration Volunteers and Larimer Conservation District) for seed and plant swaps, while offering discounted education for landscape professionals. Additionally, we're teaming up with Northern Water to provide irrigation trainings and a native grass workshop. fcgov.com/xip-events
 - **Xeriscape Codes:** Proposing new landscape standards in Land Use Code for City Council's consideration and adoption. New standards would apply to new development and significant redevelopment of commercial and multi-family properties. The following standards are proposed:
 - Limitations on the installation of high water use turf, with some exceptions.
 - Restriction of artificial turf.
 - 50% living plant coverage on the surface of landscaped areas.
 - Dedicated irrigation to trees to support tree health in times of water restrictions.
- fcgov.com/xsa

LEARN MOREResidential Programs and Rebates: fcgov.com/save-waterCommercial Programs and Rebates: fcgov.com/water-efficiency

Fort Collins Water Efficiency Plan

Engagement Synthesis

August 31, 2024

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Summary of Key Takeaways

The process of updating the Fort Collins Utilities' Water Efficiency Plan (WEP) involved two central drivers:

1. Understanding which water conservation goals and strategies are most appropriate for our community
2. Understanding our community's needs and priorities, particularly those of equity priority communities

The project team developed and executed a multifaceted engagement plan that included:

- workshops with City staff
- hiring community consultants to reach equity priority communities
- attending or creating community meetings and events
- a community-wide survey.

The project team focused on seven primary research questions when planning and implementing Water Efficiency Plan update engagement. Key takeaways are summarized below, organized by those seven questions.

1) What water conservation and efficiency strategies (e.g., programs, incentives, policies, education) are the public most interested in?

- Water efficient fixtures were the most popularly mentioned incentive program followed by xeriscaping. Water audits were also mentioned.
 - Interest in focusing conservation efforts on outdoor water use.
 - Interest in promoting xeriscaping, native plants, and other water-wise techniques and shifting cultural attitudes towards water usage.
- Education was a commonly mentioned strategy to promote water efficiency and conservation with the public.
 - Opportunities to tailor education and outreach for landscapers, who are key players in guiding homeowners; homeowners associations that set policies for outdoor landscaping for their communities; homeowners and realtors to normalize xeriscaping and water-wise landscaping; and equity priority communities to promote participation in programs.

2) What are the public's values and sentiments related to equity as it pertains to water conservation and uses?

- Wealthy residents and businesses can afford to pay fines or higher rates;
 - While low income residents would struggle to pay for bills, fines, and necessary upgrades.
 - Landlords may pay water bills for their renters, which means that tenants do not necessarily benefit from water conservation efforts.
- Low income communities face higher leakage rates, older infrastructure, and less efficient fixtures and appliances.
 - Urban heat island effect and tree canopy coverage may suffer from water use restrictions, which would disproportionately impact equity priority communities.
- Concern over the split incentive between landlords and tenants, both residential and business.
- Suggestions for direct investment into equity priority communities.

3) What are the public's top concerns around water conservation, and how strongly are those concerns held? Will those concerns drive public action?

- Top concerns include:
 - a) Long-term viability of Fort Collins's water supply, especially given the changing climate and population growth.
 - b) Water scarcity and potential for rising water costs, which would exacerbate equity and access issues.
 - c) Financial cost of water efficiency upgrades, particularly with regard to xeriscaping. Xeriscaping also presented concerns around maintenance.
 - d) Threats to water quality, especially for mobile home park residents and with climate change.
- The issues of scarcity and sustainability were nearly universal.
 - e) However, participants seemed mixed in their motivation to act.
 - i) Some responded with desires to curtail population growth and development or require much more stringent regulations on water use for new development.

- ii) Others expressed broader support for public action, while some also expressed not understanding the impact of their individual actions on the City's overall water consumption.
- iii) Many respondents expressed a lack of awareness of what the City or Utilities are doing to conserve water; few mentioned the City's water conservation goal, suggesting that the goal did not resonate.

4) What is the public's appetite for mandates versus incentives?

- Consensus—across all demographics—around a somewhat even split between incentives and regulations, depending on the target for the incentive or regulation.
 - Greater interest in regulating large businesses, public spaces, homeowners associations and the City's operations. This was particularly strong in equity priority communities and young people.
 - More desire for incentives targeted at private residences, small businesses, and mobile home parks.

5) What are the gaps in our existing public outreach approach?

- Low-income renters.
- Spanish speaking community.
- Homeowners associations, landscaping professionals, and realtors are important stakeholder groups to continue or begin engaging.

6) What are the potential drivers for individual action on water efficiency?

- Increased transparency over water conservation efforts undertaken by the City and major commercial users.
- Understanding of the impact of individuals' conservation and efficiency efforts.

7) What are effective methods for reaching both general and priority audiences?

- Invest in building relationships and building in the time during engagement processes to listen to people's concerns first.
 - Reframe engagement from an aspect of the planning process to long-term relationship-building work. (Climate Equity Committee)
- Identify opportunities to streamline or leverage existing intervention points such as when business owners receive their business licenses.
- Meeting community members at locations or times that they are already meeting and attending community events.

- Engagement opportunities to continue building off of including:
 - Re-upping the contract with Community Consultants;
 - Continue strengthening the relationship with the Community Champions.

Introduction

The Engagement Plan

In anticipation of the upcoming Water Efficiency Plan update process, as required by the Colorado Water Conservation Board, the City's municipal utility, Fort Collins Utilities (Utilities), developed a robust engagement plan and accompanying stakeholder map to solicit input from key stakeholder groups and the broader public. A consultant team including Lotus Engineering and Sustainability, LLC (Lotus) and Greenprint Partners, LLC (Greenprint) was hired to support these efforts. The engagement plan outlined the Utilities' phased approach to engagement with goals, methods, messaging, and success metrics. The three phases of engagement are below:


- **Phase 1** | Q1 2023–Q4 2024 | Planning and Technical Expert Engagement
- **Phase 2** | Q1 2024–Q2 2024 | Broad Communication and Engagement
- **Phase 3** | Q2 2024–Q4 2024 | Integrate Learnings into Water Efficiency Plan

Throughout the engagement plan, goals and methods are built around engaging target stakeholder groups at specific phases in the planning process. Key stakeholder groups are defined in the stakeholder map along with the intended range on the IAP2 spectrum of public participation, shown in Figure 1 below.

IAP2 Spectrum of Public Participation



IAP2's Spectrum of Public Participation was designed to assist with the selection of the level of participation that defines the public's role in any public participation process. The Spectrum is used internationally, and it is found in public participation plans around the world.

		INCREASING IMPACT ON THE DECISION 				
		INFORM	CONSULT	INVOLVE	COLLABORATE	EMPOWER
PUBLIC PARTICIPATION GOAL		To provide the public with balanced and objective information to assist them in understanding the problem, alternatives, opportunities and/or solutions.	To obtain public feedback on analysis, alternatives and/or decisions.	To work directly with the public throughout the process to ensure that public concerns and aspirations are consistently understood and considered.	To partner with the public in each aspect of the decision including the development of alternatives and the identification of the preferred solution.	To place final decision making in the hands of the public.
	PROMISE TO THE PUBLIC	We will keep you informed.	We will keep you informed, listen to and acknowledge concerns and aspirations, and provide feedback on how public input influenced the decision.	We will work with you to ensure that your concerns and aspirations are directly reflected in the alternatives developed and provide feedback on how public input influenced the decision.	We will look to you for advice and innovation in formulating solutions and incorporate your advice and recommendations into the decisions to the maximum extent possible.	We will implement what you decide.

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Figure 1. IAP2 Spectrum of Public Participation defines how Utilities engages a particular stakeholder group and the type of relationship the stakeholder group is intended to have with the planning process.

Two central principles underpinned the Utilities' update to their Water Efficiency Plan: One Water and equity. One Water is a planning approach and principle that seeks to integrate traditionally siloed water systems such as stormwater, wastewater, and drinking water. This principle was critical to staff engagement.

One Water Definition: "An integrated planning and implementation approach to managing finite water resources for long-term resilience and reliability, meeting both community and ecosystem needs."
 (Source: 2017 Blueprint for One Water, Water Research Foundation)

Equity is integrated into both process and outcome in this planning process. Utilities worked hard to ensure that voices traditionally excluded by institutions from decision-making processes – or equity priority communities – were folded into the engagement process through the community consultants program and conducting engagements in the community. Equity priority community members' feedback

informed the design of strategies included in the plan and shaped the evaluation process by which strategies are prioritized for implementation.

Equity Definition: A process by which policies, programs and tools are developed to ensure the elimination of existing disparities and include inclusive engagement that leverages diversity. Equity becomes an outcome once a person's identity or identities no longer impact their ability to experience equality and access to services. (Source: City of Fort Collins Equity Office)

Overview of Engagement Efforts

Utilities began with “pre-engagement” in the spring of 2023, laying the groundwork for the plan update process. This included raising awareness of the plan amongst City staff, recruiting community leaders to serve as paid “community consultants,” and building relationships with community organizations as a foundation for future engagement.

This pre-engagement process helped shape the project’s values and guiding principles, explored the potential challenges and barriers to overcome during engagement, and developed the goals and methods for the engagement plan. In transitioning to the more formal engagement period, the project team, made up of Lotus, Greenprint, and Utilities staff, developed an engagement plan to guide Utilities’ approach. Tactics carried out under this engagement plan included staff focus groups, informational interviews, community consultant-led engagements, a community-wide survey, and events attended by Utilities staff. Below is an overview of the various engagements conducted for this planning process, categorized by engagement audience.

City Staff Engagement

ROADSHOW

Utilities began engaging other City staff in Fall of 2023, before the bulk of the planning process kicked off. Utilities staff developed a presentation and shared the original Water Efficiency Plan and the proposed update at various City departmental meetings, an engagement style known as a “roadshow.” City staff had the opportunity to learn more about the Utilities’ water conservation work, ask questions, and provide initial input into the Utilities’ anticipated goals and plan objectives.

FOCUS GROUPS

In the first two weeks of April of 2024, Lotus and Utilities staff collaborated to host several City staff in a series of four focus groups intended to collect feedback on the Utilities' proposed strategies and goals. Staff attendees were recruited from all across the City's water users, including the Departments of Parks, Operation Services, Engineering, Environmental Services, and Social Sustainability. Each focus group was organized around staff with specific relationships to water, listed in Table 1 below.

Table 1. Staff focus groups and attendance.

Focus Group	Date	Relationship to Water	City Staff Attendees	Project Staff Attendees
Focus Group 1	4/1/2024	Indoor Water Use	6	4
Focus Group 2	3/21/2024	Outdoor Water Use	8	4
Focus Group 3	3/21/2024	One Water	9	4
Focus Group 4	4/1/2024	Policy and Customer Impacts	6	3
Total Attendees			29	

During these focus groups, staff discussed their priorities and values to form the basis for the driving goals of the Water Efficiency Plan update (Plan update). Then staff were led through an adapted strengths, weaknesses, opportunities, and threats analysis to identify potential strategies to help advance the Water Efficiency Plan's goals. The Policy and Customer Impacts focus group also began discussions on equity impacts of water conservation strategies and policies.

INFORMATIONAL INTERVIEWS

A key aspect of this Plan update process for Utilities was the development of an evaluation by which strategies would be assessed for their potential equity impacts. This evaluation was co-created by Utilities staff and the consultant team, then vetted through a series of informational interviews with key staff members.

Table 2. Staff informational interviewees.

Staff Informational Interviews	
Staff Member	Title, Department

Liz Messenger	Lead Equity & Inclusion Specialist, City of Fort Collins Equity Office
Angela Peña	Senior Sustainability Specialist, City of Fort Collins Climate Team
John Song	Business Support Specialist III, City of Fort Collins
Katy McLaren	Lead Climate Specialist, City of Fort Collins Climate Team

Community Engagement

Community engagement was led by Utilities with support from the consultant team and the City's Community Consultants program. This phase of engagement was designed to employ a wide array of tactics but produce comparable results. This enabled feedback from across engagement formats and diverse participants to be more easily compiled and understood. The project team crafted a set of priority questions and supplementary questions that would be shared across the different formats: the same questions were provided to the community consultants, included in the survey, and asked during the Utilities-led events.

COMMUNITY CONSULTANTS PROGRAM

Fort Collins Utilities began the broader public engagement process by hiring four community members to lead engagement with priority stakeholder groups. These community consultants, Melinda Laituri, Haley Mendoza, Tallon Nightwalker, and Victoria Silva, were contracted for a maximum of six weeks and required to conduct at least three engagement sessions. Each selected their target stakeholder groups based on their specific backgrounds and experiences.

Community consultants were given the freedom to determine what engagement format and locations would work best for their target stakeholder groups. Utilities provided baseline training on the Water Efficiency Plan to ensure the consultants could answer questions, as well as workshop materials such as a presentation and set of guiding questions. At the end of their contract terms, the community consultants held debrief meetings with Utilities staff to share their insights and findings, as well as suggestions for improvement for future iterations of the program. Their efforts are summarized in Table 3 below.

Table 3. Community consultants and the targeted stakeholder groups, number of stakeholders engaged, and the locations of the conducted engagements.

Community Consultant	Stakeholder Groups	Number Engaged	Locations of Engagements
A	<ul style="list-style-type: none"> Native American community Small business owners and managers Wildlife Interest 	<ul style="list-style-type: none"> 12 6 15 	<ul style="list-style-type: none"> National Association for Interpretation Meeting American community One-on-one visits Northern Colorado Wildlife Center
B	<ul style="list-style-type: none"> Religious community Elderly 	<ul style="list-style-type: none"> 12 25 	<ul style="list-style-type: none"> Unitarian Church Osher Lifelong Learning Institute
C	<ul style="list-style-type: none"> Mobile home community Colorado State University community Spanish speakers 	<ul style="list-style-type: none"> 10 75 5 	<ul style="list-style-type: none"> Harmony Village Mobile Home Park ClubHouse Colorado State University (3 events) One-on-one phone calls and home visits with Spanish speakers
D	<ul style="list-style-type: none"> Students Renters 	<ul style="list-style-type: none"> 39 total 	<ul style="list-style-type: none"> Warner College of Natural Resources Lory Student Center Ballroom Morgan Library
Total Community Members		>110	Representing 9 stakeholder groups

COMMUNITY-WIDE SURVEY

Utilities and the consultant team also developed a community-wide survey to collect input from the broader Fort Collins community on water conservation priorities, concerns, and opportunities. The bilingual survey was uploaded to the City's online engagement platform, Our City, and distributed in hard-copy form to two libraries, the Utilities Administration Building, and events attended by Utilities staff. Utilities promoted the survey digitally through several avenues, including Our City, social media, email

distribution lists, and at events attended by Utilities staff. Utilities staff also tabled at the libraries for two days to hear from library patrons directly and promote the survey in-person. Ultimately the survey garnered 1,329 responses, including 40 hard copy responses and five Spanish language responses.

CLIMATE EQUITY COMMITTEE

The City's foundational climate action plan, Our Climate Future, helped establish the Climate Equity Committee, a citizen advisory group that advises the City on integrating equity into its climate work. The Committee agreed to hear from Utilities staff three times throughout the process and provided feedback on the engagement process.

Additionally, two members of the Climate Equity Committee agreed to informational interviews with the Lotus team and provided feedback on the equity evaluation.

COMMUNITY EVENTS

Utilities staff attended several community meetings throughout the process to collect input and feedback from specific stakeholder groups. Over the course of six months, Utilities staff presented at or organized eight meetings, listed in Table 4, to listen and collect feedback on water conservation goals, programs, and challenges.

Table 4. Events attended by Utilities staff to solicit input from community members on the Water Efficiency Plan update.

Community Meetings Attended by Utilities Staff			
Date	Meeting	Stakeholders	Attendees
12/4/2023	Super Issues Meeting	Representatives from various City Boards and Commissions	15
2/12/2024	Certified Landscaping Professionals & Xeriscape Incentive Program Ambassadors	Water-wise landscaping professionals	50
3/5/2024	Student Sustainability Center Meeting	Colorado State University Students	15

3/20/2024	Community Champions	Spanish speakers in mobile home parks	9
3/27/2024	Defend Our Beer, Campus Sustainability Event	Colorado State Community, broad community	70
4/16/2024	Student Sustainability Center Event	Colorado State University students	15
4/19/2024	People First	People with disabilities	5
5/29/2024	NoCo Business Connect	Small business owners	9

INFORMATIONAL INTERVIEWS

Along with interviewing key staff and members of the Climate Equity Committee, Lotus also talked with five community leaders about the equity evaluation process. These individuals were identified by Utilities staff as key connectors and experts who could provide insight on existing equity challenges in the City, on best practices for integrating equity into plans, and from the perspectives of equity priority communities.

Engagement Results

The following sections will detail the results of each community engagement effort, including the most common sentiments, program or policy suggestions, and general feedback heard from the participants.

Community Consultants

The community consultants program was integral to the engagement approach of this plan update process. Designed to collect community insights and feedback authentically and through trusted community brokers, the **community consultants program emphasized meeting communities where they are** rather than inviting them to come to Utilities or the City.

Ultimately, the program did result in a variety of outreach styles and meeting formats. Meeting formats ranged from one-on-one phone calls and home visits to attending an existing community meeting, deploying many of the engagement best practices described in the engagement plan. **Reaching over 110 community members in over 15 different locations across the City and over the phone and in people's homes**, the consultants were able to cultivate deeper conversations with stakeholder groups typically considered more difficult to reach by official City or Utility channels.

In their debrief conversations with Utilities, the **consultants universally enjoyed the experience of connecting with their communities** and the opportunity to discuss water issues. Separately, the City's Climate Equity Committee suggested extending the community consultant contracts to ensure Utilities continued investing in lasting relationships with these communities. **This feedback suggests the program developed a solid foundation for Utilities to continue growing its role as a partner to communities** and avoid the usual pattern of engagement that sees this investment in relationship-building end with the planning process.

MOST COMMON SENTIMENTS AND CONCERNS

Several common themes arose from the community consultants' work. **Participants across the stakeholder groups universally agreed that the long-term sustainability of Fort Collins's water supply, especially given the changing climate, was a major concern.** This anxiety over the future often dovetailed with the concern that water scarcity would raise the cost of water and exacerbate equity and access issues. Relatedly, participants often highlighted the importance of xeriscaping and shifting cultural attitudes towards water usage.

Three Most Common Sentiments

1. Sustainability of the City's water supply.
2. Equitable access to clean water into the future.
3. Importance of xeriscaping and cultural shift in water use.

Other themes that also appeared frequently include water quality and ensuring Fort Collins remains a **healthy environment**, the **challenge of finding helpful resources** on saving water, **lack of awareness of City conservation and efficiency actions**, and the **split incentive structure between renters and landlords**. Some of these priorities were divided along demographic lines. For example, the community consultant that conducted outreach with the religious community found this stakeholder group held a strong connection with landscaping and gardening, leading to some complicated feelings around efforts to change the landscape.

Table 5. Other common priorities expressed by different stakeholder groups.

Common Theme	Stakeholder	Details
Lack of awareness of water issues	Elders Religious	Concern that the broader public is not aware of the importance of water.
Landscaping	Religious	Concern that the shift to water-wise landscapes will change their gardens, while recognizing the importance of saving outdoor water.
Forest fires and wildfires	Elders Students	Concern that drought, water shortages, and water-saving landscapes will increase severity of wildfire.
Compliance	Mobile home	Concern over the enforcement of and

	park residents Spanish speakers Students	compliance with water regulations. Wealthier residents and businesses can afford fines and fees and not change behavior. Difficulty in learning and tracking changing water use rules and regulations.
Water quality	Mobile home park residents Spanish speakers	Concern over the quality of drinking water and the need to continue using filters in mobile home parks. Poor infrastructure is a major factor in water quality and leaks.
Accountability	Mobile home park residents Students Renters	Desire to hold large institutions more accountable to water rules and more strictly regulate business and industry water use.
Watershed quality and Poudre River	Religious Conservation Indigenous	Concern over the Poudre River's flow and quality of the watershed and ecology.
Homeowners associations and landlords	Mobile home park residents Renters Students	Encouraged to use more water and prevented from adopting water-wise landscaping. Not enough emphasis from homeowners associations and landlords on water conservation and efficiency.
Affordability	Business Students Renters	Concerns about water affordability and the impact of water rates. Lack of knowledge on surge pricing.
City leadership and action	Students Renters Religious Conservation	Recognition of the importance of City landscaping and seeing the City act and model water-wise practices. Reevaluate gardens and recreational fields.
Education and Communications	Students Renters Religious Elders	Improve access to resources. Provide education on native plants, water-wise landscaping, etc. Integrate water conservation into school education.

	Conservation	
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SUGGESTIONS FOR UTILITIES

The community consultants also collected input on priorities for the City and Utilities, both in terms of actions that Utilities and the City should take and for programs that could serve communities. Table 6 below shows support for various suggested programs across stakeholder groups.

RULES AND REGULATIONS

Most commonly expressed across all stakeholder groups engaged by the community consultants was a **desire for the City to stop installing turf lawns and convert as many landscaped areas to xeriscaping and native plants as possible.** Community members often also asked for a community restriction on grass lawns and requiring the shift to xeriscaping and/or native plant gardens.

OUTREACH AND EDUCATION

The top suggestion for programming centered around education, resources, and tools. **Participants reported wanting more and varied programming and resources to learn about topics** from home practices like dishwashing and laundry to xeriscaping and native plants. Many felt that existing materials were unclear, inaccessible, or were not detailed or comprehensive enough. Some also noted that the materials did not always reflect commercially or readily available products. Unsurprisingly given the high priority placed on xeriscaping, one of the top requests was more support for and training around xeriscaping, converting lawns, and planting native species.

Stakeholders also recognized the **importance of using messaging campaigns to shift cultural expectations and practices around water and landscaping.** However, participants commonly felt that most City messaging did not always reach or resonate with their communities. Relatedly, a common sentiment was lack of awareness of City programs or efforts to save water; participants wanted **transparency around the City's water use and practices.**

Suggestions for improving or implementing community outreach on water conservation include expanding access to a variety of educational programming and hosting events with food and giveaways. Programming and events could focus

on planting native species, xeriscaping, and converting lawns. Another suggestion was to work with local schools and community organizations to develop educational materials and curriculum.

TRANSPARENCY

A common frustration amongst stakeholder groups was the **lack of understanding of individual, City, and other institutional water use**. Renters and mobile home park residents, among other groups, felt stymied in their water efficiency actions because landlords control their meters. Most groups felt that they lacked the tools to understand **how and where to save water and measure the impact of their actions**. The latter point is extrapolated from the predominant assumption that individual water consumption likely pales in comparison to that of businesses and the City.

Other points of confusion included the 2015 Water Efficiency Plan's gallons per capita per day metric, how much water is consumed by different uses (e.g., lawns, multifamily buildings, leaky pipes, showering or other daily habits, etc.), and how water consumption is measured. Others called for lawns to be watered with raw or nonpotable water, suggesting a lack of awareness of the City's outdoor watering practices.

HOMEOWNERS ASSOCIATIONS

Finally, many brought up **working with homeowners associations as a critical step to shifting the culture around water use and enabling more residents to convert landscaping to water-wise practices**. Notably, many mobile home park residents reported their property managers encouraging excess water use and maintenance of lush green lawns. One participant explained that their lease required lawn maintenance and that they would "get in trouble" if they did not water their lawn enough.

Table 6. Programs suggested during community consultant engagements, organized by topic.

Topic	Suggested Program	Stakeholder Group
Xeriscaping	Turf Replacement Program Incentives for xeriscaping Educational programming and resources	All

Water Efficiency	Free, discounted, or incentivized water efficient fixtures Fixture replacement program Sprinkler head maintenance Targeted programs for low income neighborhoods, commercial operations, landlords, businesses	Mobile home park residents Students/renters Elderly Religious community
Homeowners Associations	Targeted outreach program to collaborate on updating regulations	Elderly Mobile home park residents Students/renters Small businesses Religious community
Infrastructure (distribution)	Leak fix program Alerts for unusual water use / leak detection	Mobile home park residents Religious community
Community Gardens	Invest in more demonstration gardens	Religious community Students / renters
Indigenous Water Efficiency Center	Showcase indigenous water saving practices	Indigenous
Water Use	Text alerts for high water usage Education on water consumption by daily habit and by cost evaluation Reward low water usage Water audits	Religious community
Reuse	Support for greywater, reuse, rain collections, or use of non-potable water	Religious community
Landlord and Renter Split Incentive	Sample water efficiency leasing language Renters' checklist for fixtures and appliances Landlord incentives / programs for installing efficient appliances	Students / renters Elderly

Water Use Strategies	Neighborhood-specific water conservation plans that account for unique geographical and demographic characteristics of each area in Fort Collins.	Conservation community
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EQUITY CONSIDERATIONS

Almost every community consultants' engagements surfaced insights into concerns around equitable water use. One broadly shared frustration centered around accountability: **wealthy residents and businesses could afford to pay fines or higher rates to escape the consequences of water use regulations or restrictions, while low income residents would struggle to pay for bills, fines, and necessary upgrades.** Many groups including students, mobile home park residents, and others supported stricter penalties or regulatory actions to hold excessive water users accountable. However, Utilities may wish to balance this with the note that some lower income neighborhoods see a higher number of people per household, which could also contribute to higher usage rates. Greater transparency around the consumption patterns of the City's major water users, especially with industrial and commercial users, was a common desire.

Another concern centered around the older infrastructure that tends to be present in lower income neighborhoods, which can mean **higher leakage rates and less efficient fixtures and appliances.** Such factors make it more challenging for these communities to practice efficiency and conservation. Additionally, as noted by the religious community, low income areas struggle more with **urban heat island effect** and need water to keep their neighborhoods cooler. If this equity issue is addressed through more green space and trees, this creates additional water demand. Finally, a common concern amongst mobile home park residents centered around water quality and the age of infrastructure serving their parks. Many felt their drinking water was unsafe and blamed the lower quality of pipes which they knew leaked as well.

Finally, participants emphasized that most people want to improve their water efficiency and to conserve but these equity priority communities may not know how or have access to the tools and resources to implement actions. They suggested **direct investment into equity priority communities** to avoid the accessibility pitfalls around applying for programs.

THEORY OF CHANGE: INCENTIVES VERSUS REGULATIONS

Broadly speaking, the participants engaged by the community consultants supported an **even split between incentives and regulations with a slight preference towards leaning more heavily on regulations and penalties for excessive use.** Water restrictions during drought periods were universally supported. This was caveated by concerns around over-enforcement of low income households and equity priority communities; most stakeholders expressed interest in providing assistance to these communities rather than punishing through fines. Others felt that new developments should be held to higher efficiency standards.

Out of the engaged stakeholder groups, students and renters emphasized most strongly the regulatory component, and supported starting **water restrictions or enforcement mechanisms with the City's largest water users first.** Students and renters called for restrictions on watering lawns and landscaping during peak and daytime hours and moving away from rate structures that enable significant water use. They felt that water users would respond more to punishment and bills than to incentives but also that equity priority communities would likely use products if Utilities had giveaway programs. Accompanying this sentiment was the desire for the City to **develop rules and regulations around community priorities and values for water;** for example, some felt that golf courses should be deemphasized and watered less.

Many wanted to incentivize businesses to adopt more water efficient practices and appliances. Older people highlighted the need to fix infrastructure and leaks, suggesting requiring the replacement of inefficient fixtures.

Climate Equity Committee

The Climate Equity Committee provided insights into the role that targeted engagement with equity priority communities should play in shaping the Utilities' priorities and program offerings.

EQUITY PRIORITY COMMUNITY ENGAGEMENT

Emphasized most strongly was the **importance of building relationships and building in the time to listen first.** The Climate Equity Committee acknowledged the challenges of meeting planning deadlines, working within existing staff capacity, and other structural barriers to investing significant time into community relationships. However, they

stressed that **change cannot happen without a paradigm shift in how Utilities approaches engagement.**

For example, the Climate Equity Committee echoed the recommendation of meeting people where they are; they explained that this may require Utilities to **reexamine their commitment to engagement structures that produce the most data** and to seek higher quality data that is less impacted by non-response bias. They also suggested that engagement **builds community knowledge** of topics that impact their lives and that if Utilities offers useful information and resources, their messaging will spread organically through community networks. Though perhaps slow to cultivate initially—and a longer timeline than a typical plan engagement phase—these information sharing networks can grow into highly effective relationships for Utilities.

Finally, the Climate Equity Committee recommended continuing the practice of **following up with community** members who contribute to the planning processes. Accountability is critical and works to help heal community distrust in institutions. Utilities may wish to act on a few of the options provided by the Climate Equity Committee, such as keeping the community consultants' contract open, publicly disseminating the information shared with the community consultants, and **partnering with the Neighborhood Services Department** to continue showing up in the community.



Utilities-Attended Events

In effort to meet community members where they already gather, Utilities attended several community meetings and events to build relationships and collect perspectives on water conservation and efficiency. Table 7 below shows a list of events and the key priorities, challenges, and other themes that arose from those conversations. The following sections provide additional detail on the key findings from each meeting.

Table 7. Key concerns and priorities collected during Utilities-attended event engagements.

Community Events and Meetings Attended by Utilities			
Event	Priorities	Challenges/ Concerns	Other Themes
Boards and Commissions Super Issues Meeting	<ul style="list-style-type: none"> Understand the need for conservation for future Focus efforts on outdoor Focus on commercial and HOAs 	<ul style="list-style-type: none"> Xeriscaping training and cost Impact on housing affordability Establishing waterwise landscaping Tradeoffs with urban heat and tree canopy coverage Culture shift to understanding “natural” landscape 	Mix of incentives and regulations <ul style="list-style-type: none"> Even split or more incentives Community education and support for xeriscaping to emphasize ease of maintenance
Landscape Professionals	<ul style="list-style-type: none"> “Reasonable” restrictions to adapt to climate change and water scarcity Incentivize smart controllers Education for both landscapers and 	<ul style="list-style-type: none"> Drip irrigation in practice Mixed reactions to potential restrictions 	<ul style="list-style-type: none"> Integrate solutions regularly to create consistency in how water is treated and cultural change Landscaper and contractor certifications

	homeowners		<ul style="list-style-type: none"> • Education on developing water budgets for landscapes • Efficient irrigation programs • Plants list that is commercially available • XIP classes
Community Champions	<ul style="list-style-type: none"> • Drinking water quality • Water conservation and efficiency against the arid climate 	<ul style="list-style-type: none"> • Water quality and do-not-drink notifications • Water scarcity and sustainability of water supply for future generations • Lack of accountability for water quality and quantity • Lack of clarity in responsible entity for water-related issues and support. • Support for conservation efforts from mobile home park managers and owners 	<ul style="list-style-type: none"> • Communications and education on home water saving practices • Free or subsidized water filters and efficient fixtures and appliances • Translated materials and social media information • Host events at mobile home parks
Colorado State University Students	<ul style="list-style-type: none"> • Water conservation and efficiency against the arid climate • Holistic water conservation and efficiency approach including incentives, 	<ul style="list-style-type: none"> • Accountability for major water users • Climate change impacts on water quantity and quality • Understanding the impact or changes that students can 	<ul style="list-style-type: none"> • Behavior change and educational campaigns to target customers' personal choices and habits, including landscaping and gardens.



	regulations, and education	make as individual renters	<ul style="list-style-type: none"> • Programs to deliver or incentivize water efficient fixtures and appliances. • Laws and regulations that limit watering and water consumption. • Audits and water use inspections.
People First	<ul style="list-style-type: none"> • Independent living • Water to shower and for relaxation 	<ul style="list-style-type: none"> • Cost of water efficient fixtures and appliances • Ability to or knowledge of equipment installation 	<ul style="list-style-type: none"> • Low-flow showerheads • Catching extra water in shower and using this for yards • Timers while taking showers • Turning off water when brushing teeth, etc. • A program similar to the Home Energy Reports delivered by Fort Collins Utilities' energy side
NoCoBiz Connect	<ul style="list-style-type: none"> • Lower barriers and easier points of entry to conservation and efficiency 	<ul style="list-style-type: none"> • Cost of water efficient fixtures and appliances • Landlord-tenant split 	<ul style="list-style-type: none"> • Streamline logistics by providing one point of contact for all programs.

		incentive	<ul style="list-style-type: none">• Provide a hub of educational information for businesses.• Advertise water efficiency programs upon permit issuance.• Work with landscapers, as businesses rely on these professionals for recommendations and design.• Develop a Utilities program to identify and fix leaks.
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LANDSCAPE PROFESSIONALS MEETING

On February 12, 2024, Utilities engaged a group of certified landscape professionals and xeriscaping incentive program ambassadors to discuss their water conservation priorities. Approximately 50 attendees discussed questions around the best approach for the City to reduce community-wide water use.

ATTITUDE TOWARDS WATER RESTRICTIONS AND REGULATIONS

Generally, the group **slightly preferred a more voluntary driven approach to reducing water use but supported both regulations and incentives.** When asked about watering restrictions, a plurality (31%) wanted to see biannual restrictions while 20% reported never wanting outdoor watering restrictions. During discussion of this question, several expressed support for “as needed” restrictions and that adequate planning and programming could over time reduce the need for such restrictions.

The most popular kind of restriction (matching support for voluntary incentives) supported by the group was **prohibiting daytime watering**, followed closely by imposing **higher rates on high users**. The group felt that restricting the number of allowable watering days did not reduce overall community water use and was unuseful. However, the participants also stressed that water conservation is made much easier when landscapes and development are built low-water to begin with. Other regulatory ideas that received support include streamlining the permit processes for impermeable surface replacements, rates that incentivize efficiency, requiring or installing meters to monitor usage, and imposing a maximum outdoor gallons per square foot limit.

SUPPORT FOR PROGRAMS

During the discussion of programs that they wanted to see implemented, the participants **strongly supported all of the incentive options** that Utilities presented. The top two strategies were **ongoing training and certification opportunities for landscaping professionals and rebates.** A few observed the opportunity to tailor training materials such as plant lists more closely to local availability. Similarly, many advocated for more homeowner, newcomer, and real estate industry education, to ensure their landscaping work could be maintained into the future and to communicate the importance of saving water through landscaping.

Programs and policies discussed during this conversation include higher rates for major water users, expanding or continuing rebate and xeriscape incentive

programs, and evaluating municipal codes around the use of turf. A survey question revealed the most support for a water efficient irrigation system rebate, followed closely by the incentive to convert turf to xeric landscapes. A few related suggestions include to promote tree installations in high water use areas to reduce evaporation and to develop or promote cost calculators for landscape conversions.

BROADER FEEDBACK

Regardless of the use of mandatory or voluntary tools, participants expressed the desire to see **1) the City lead strongly by example in water conservation** and **2) help with easing the long-term burden of managing and maintaining right-sized water equipment and schedules**. One opportunity identified for the City was to swap out their turf and communicate to the community that brown landscapes are acceptable. Some suggested that drip irrigation is difficult to manage and work in practice and that leaks were a major challenge.

COMMUNITY CHAMPIONS MEETING

A mid-stream review of the survey's demographic data revealed that respondents leaned whiter, wealthier, and towards homeownership in comparison to the overall City demographics. In response to this finding, Utilities sought opportunities to target outreach to, and recruit focus group participants amongst, customers of color, low income customers, and renters. Utilities was connected with the Community Champions, a program that seeks to make inroads with Spanish-speaking residents of mobile home parks in the City of Fort Collins.

On March 20, 2024, Utilities staff met with nine Community Champions, all of whom were women and used Spanish as their primary language. Most or all lived in the mobile home parks and all or most were likely to be first-generation immigrants.

MOST COMMON SENTIMENTS

By and large, the participants responded positively to the engagement effort. Their main concern revolved around **water quality**, as many had received do-not-drink notifications. Other top concerns included water scarcity, accountability for water use and water quality, and desire for more education and communications on saving water. Participants **universally recognized the importance of water conservation and efficiency** as a result of the arid climate but were to varying degrees unfamiliar with the Utilities' water conservation programs.

SUGGESTIONS FOR UTILITIES

Participants appreciated the giveaways that Utilities brought, which included water efficient showerheads, hose nozzles, toilet tank banks, and timers for the shower and hose. Their reactions indicate that developing a program to expand this effort—and include water filters—could be an opportunity for Utilities to build and strengthen relationships with equity priority communities.

Other suggestions for improving relationships and boosting participation amongst this community included integrating language access throughout Utilities' communications, including on websites frequented by equity priority communities like Facebook. They enthusiastically endorsed the idea to **hold events with mobile home parks** and wanted to see more educational engagements, suggesting that their community would broadly be interested. Key to this tactic is engaging and working with mobile home park managers and owners; without their buy-in and cooperation, residents felt limited in their conservation efforts.

COLORADO STATE UNIVERSITY STUDENT SUSTAINABILITY CENTER EVENTS

Utilities attended two Colorado State University Sustainability Center student events, one on March 5, 2024 and the second on April 16, 2024. At these engagements, staff spoke with students about the Water Efficiency Plan and encouraged attendees to take the survey. Due to this approach, most of the results of this engagement may be found in the survey analysis; however the conversations with students did yield some key findings.

MOST COMMON SENTIMENTS

The students broadly supported a wide range of solutions as potentially effective, suggesting that they recognize water conservation and efficiency as a systemic issue that requires a diversity of strategies to achieve a variety of goals. Generally, they supported an all-of-the-above approach to water conservation, naming incentives, education, and regulations as all effective approaches to reducing water use. Opportunities they observed as potential tools for Utilities' Water Efficiency Plan include:

- Behavior change and educational campaigns to target customers' personal choices and habits.
- Programs to deliver or incentivize water efficient fixtures and appliances.
- Programs and behavior change campaigns that support converting landscaping and gardens to water conservation-focused versions.

- Laws and regulations that limit watering and water consumption.
- Programs to audit and inspect water use.

PEOPLE FIRST MEETING

As part of a concerted City-wide effort to highlight the voices of community members with disabilities, Utilities sought out the organization, People First, to host a meeting with its members on the Water Efficiency Plan. The goal was to learn more about how people with disabilities interact with and use water and how water efficiency and conservation may impact them.

Utilities met with a group of five Larimer County residents with disabilities, one advocate for people with disabilities, and one caretaker on April 19, 2024. The participants ranged in their living situations and noted that many people with disabilities strive to live more independently.

WATER CONSERVATION OPPORTUNITIES

Perhaps because of this focus on independence, many participants' first instincts in discussing conservation centered on showering. They suggested the following opportunities:

- Low-flow showerheads
- Catching extra water in shower and using this for yards
- Timers while taking showers
- Turning off water when brushing teeth, etc.
- A program similar to the Home Energy Reports delivered by Fort Collins Utilities' energy side

WATER CONSERVATION BARRIERS

Participants also observed the following as barriers to their abilities to save water:

- Income – the affordability of new water efficient fixtures and appliances.
 - People with disabilities may live on fixed incomes and as a result face challenges in making significant new purchases outside their day to day living expenses.
- Knowledge of and ability to complete equipment installations.
 - Once they do procure new fixtures or appliances, people with disabilities may encounter difficulty in installing them.

- This suggests that programs that deliver free or subsidized water efficient fixtures or appliances should include options to request assistance in culturally sensitive ways.

NoCoBiz CONNECT

Acknowledging the lower participation rates from businesses in the survey, Utilities reached out to a business association, NoCoBiz Connect, to organize a focus group with local businesses. Nine participants from local businesses attended the May 29, 2024 meeting.

MOST COMMON SENTIMENTS

Participants broadly responded very positively to the engagement session and expressed interest in several Utilities programs, including:

- MyWater.
- Indoor and outdoor efficiency rebates.
- Xeriscaping incentive program.
- Indoor water use assessments.

One program that the participants expressed little interest in was Utilities' landscape assessments.

SUGGESTIONS FOR UTILITIES

A few central themes arose from the discussion on opportunities for Utilities to support businesses' water conservation efforts. Participants expressed the general need for lower barriers and easier points of entry. Specific proposals included:

- Streamline logistics by providing one point of contact for all programs.
- Provide a hub of educational information for businesses.
- Advertise water efficiency programs upon permit issuance.
- Work with landscapers, as businesses rely on these professionals for recommendations and design.
- Develop a Utilities program to identify and fix leaks.

Participants also gave insight into a critical factor to businesses' willingness to engage in water conservation: **landlords often pay water bills for businesses that rent their space, which means that tenants do not necessarily benefit from water conservation efforts.** This tenant-landlord split incentive issue came up

often with renters of all backgrounds, including mobile home park residents and other equity priority communities. Most respondents surface this issue with Utilities likely because they see this as a core policy issue that Utilities and the City should address.

Survey Analysis

Acknowledging that the survey distribution targeted, but was not limited to, Utilities' service area, Lotus analyzed the demographic results against [Fort Collins Census](#) data. The average survey respondents were over 60 years old, white, had a household income of \$100,000 or more, and were homeowners. These characteristics were over-represented in survey respondents as compared to data from the Census Bureau, as discussed in greater detail below. Most respondents (93.4%) described their perspective as a resident, while 4.5% responded to the survey from the perspective of a business, organization, or institution, and 1.4% held both perspectives.

METHODOLOGY

SURVEY DISTRIBUTION

The bilingual survey was distributed digitally through several avenues, including Our City, the City's online engagement platform, social media, email distribution lists, and at events attended by Utilities staff. The survey was also distributed via hard copy paper surveys at two libraries in Fort Collins, the Utilities Administration Building, and events attended by Utilities staff. Responses from the paper surveys were entered manually into the Our City response spreadsheet.

KEY RESEARCH QUESTIONS

The team identified several key research questions to motivate the survey analysis:

- What water conservation and efficiency strategies (e.g., programs, incentives, policies, education) are the public most interested in?
- What are the public's values and sentiments related to equity as it pertains to water conservation and uses?

- What are the public’s top concerns around water conservation, and how strongly are those concerns held? Will those concerns drive public action?
- What is the public’s appetite for mandates versus incentives?
- What are the gaps in public outreach?
- What are the potential drivers for individual action on water efficiency?
- What are effective methods for reaching both general and priority audiences?

To begin answering these research questions, Lotus analyzed the survey data, first for demographics and then for trends in sentiment (e.g., priorities, values, concerns, etc.). For a detailed explanation of the survey analysis methodology, see [Appendix B](#).

DEMOGRAPHICS ANALYSIS

The team performed a demographic analysis to gain insight into the profile of respondents and identify missing demographics that should be targeted through other engagement tactics. Responses to the demographic questions were compared to Census Bureau data for the City of Fort Collins to understand how representative the respondent sample is of the broader population. It should be noted that the Census Bureau data includes a larger population than the Fort Collins Utilities service area; additionally, although the survey distribution was targeted to Utilities customers, the survey did not preclude non-customers from responding.

SENTIMENT ANALYSIS

An analysis was conducted to identify trends and themes in the survey respondents’ sentiments regarding water conservation and efficiency. The survey questions, which can be found in [Appendix A](#), included several closed questions that sought to understand respondents’ top water-related priorities and concerns, inclinations towards various policy tools for saving water, and propensity to act on water usage; two additional open-ended responses sought to capture feedback on effective water conservation programs and Utilities’ approach to water equity. The team ran the open-ended responses through AI software to identify top trends and cross-checked this analysis by reading

through 20% of the qualitative data. The sentiment analysis further disaggregates responses by demographic where statistically significant.

RESPONDENT DEMOGRAPHICS

RESPONSE RATE

Out of the 4,092 visitors to the Our City online survey website and events that distributed paper surveys, the survey collected 1,319 responses; five of these respondents took the survey in Spanish, all online. Of those responses, almost 100 percent of respondents completed the short version of the survey, around 67 percent finished the long version, and 58 percent completed the entire survey including the demographic questions.

For a population size of almost 170,000 residents, the total number of responses is statistically significant at a 99% confidence level and 5% margin of error. However, the response rates for all non-white racial and ethnic demographics and renters are not statistically significant to their population numbers in the City of Fort Collins. The following analysis of responses will not correct for nonresponse bias and will avoid disaggregating results by these demographics.

Instead, Fort Collins Utilities led targeted outreach to groups that represent some of these low-response rate demographics including the Northern Colorado Business Connect and Community Champions. This effort followed a mid-survey data review that identified lagging response rates in particular demographics.

SURVEY MARKETING

The survey was distributed across different mediums to reach a broad swath of the Fort Collins population. The main traffic channels, or the ways respondents accessed the survey, were: OurCity website, email, .gov sites, search engine, social, and referrals. The channels with the most traffic were the OurCity website, social, and referrals, with the largest increase in responses coming immediately after an email was sent via the MyWater portal to approximately 20,000 customers.

The survey was also marketed through ads and by creating paper versions. The ads played during commercials at the local movie theater, yielding 35 responses.

Forty paper surveys were received, 20 from in-person events and the remainder from the libraries.

AVERAGE RESPONDENT

Acknowledging that the survey distribution targeted, but was not limited to, Utilities' service area, Lotus analyzed the demographic results against [Fort Collins Census](#) data. The average survey respondents were over 60 years old, white, had a household income of \$100,000 or more, and were homeowners. These characteristics were over-represented in survey respondents as compared to data from the Census Bureau, as discussed in greater detail below. Most respondents (93.4%) described their perspective as a resident, while 4.5% responded to the survey from the perspective of a business, organization, or institution, and 1.4% held both perspectives.

Race and Ethnicity

RACIAL AND ETHNIC DEMOGRAPHICS

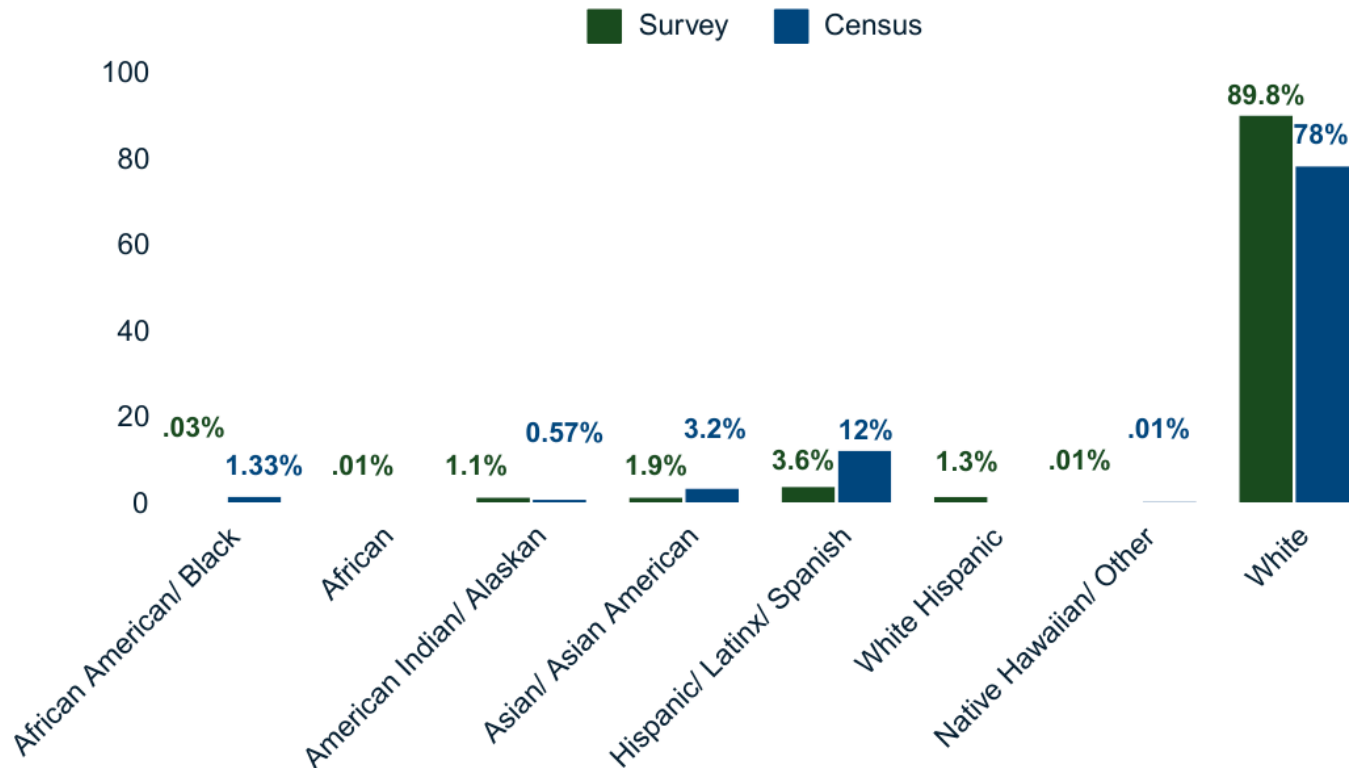


Figure 2. Race and ethnicity data reported from 799 respondents.

According to data from the 2022 Census Bureau American Community Survey, white respondents were overrepresented in the survey: 91.9 percent of survey respondents identified as white, while 89.9 percent of the Fort Collins population identify as only white. On the other hand, the Fort Collins Hispanic population was largely underrepresented in the survey. Only 4.9 percent of respondents identified as Hispanic, while 12 percent of the Fort Collins population identify as Hispanic. Asian and/or Asian American respondents reported a smaller difference to the overall Fort Collins population, at 1.9 percent of survey respondents to the Census Bureau's 3.2 percent. Just 0.5 percent of respondents reported African American, black, or African racial or

ethnic backgrounds, while these racial and ethnic groups comprise 1.33 percent of the Census population. Figure 2 above outlines these results.

Age

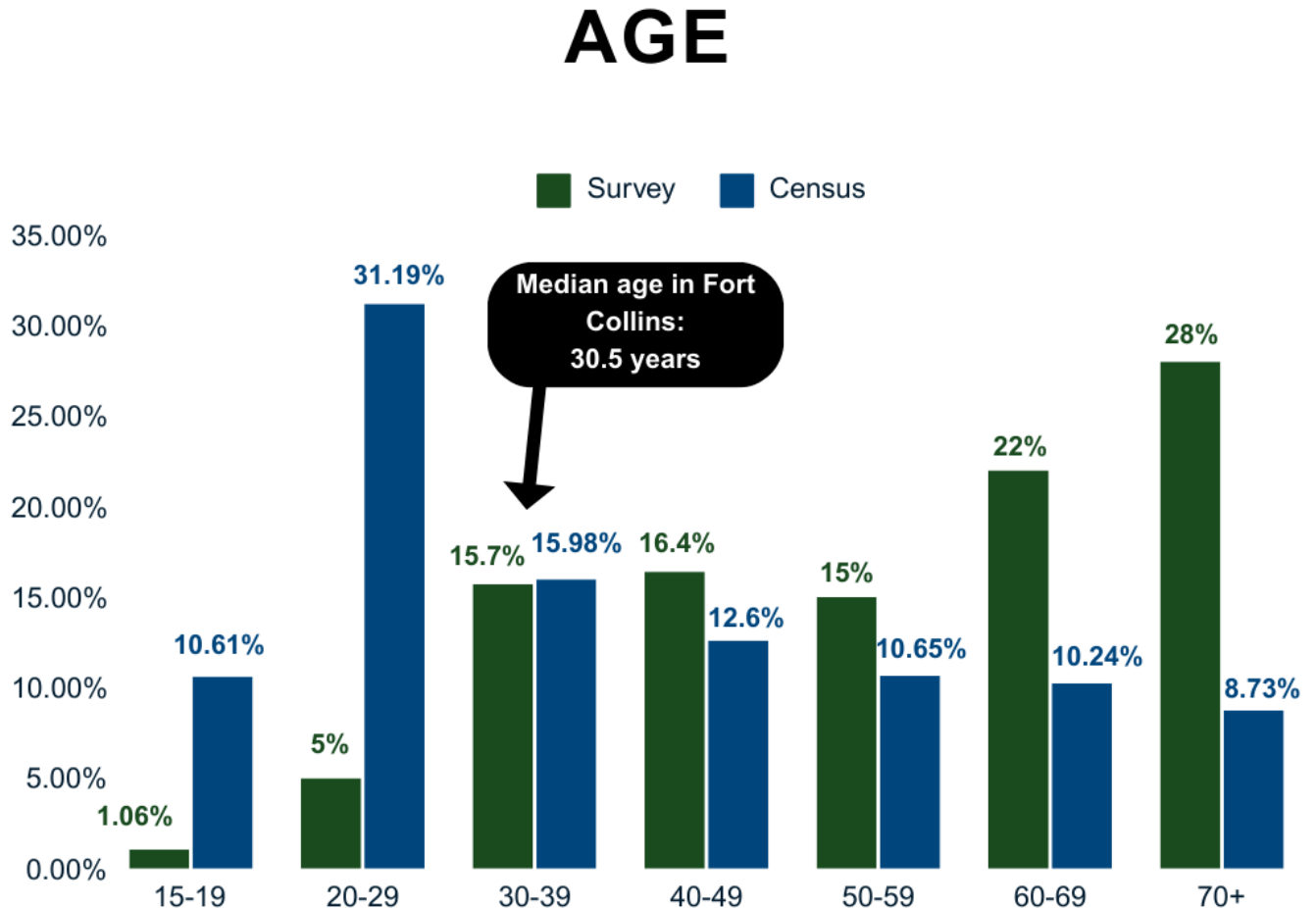


Figure 3. Race and ethnicity data reported from 798 respondents.

As seen in Figure 3, respondents in their thirties responded closely to their representation in the overall population. However, the gap between the survey respondent pool and Census Bureau data grows with each following age bracket, leading to a significant overrepresentation of older adults within the survey results. Fifty percent of respondents were over the age of 60, while only 18 percent of the Fort Collins population is over the age of 60. The significant

discrepancy in respondents in their 20s suggests that the broad survey outreach did not resonate as well with younger groups.

Income

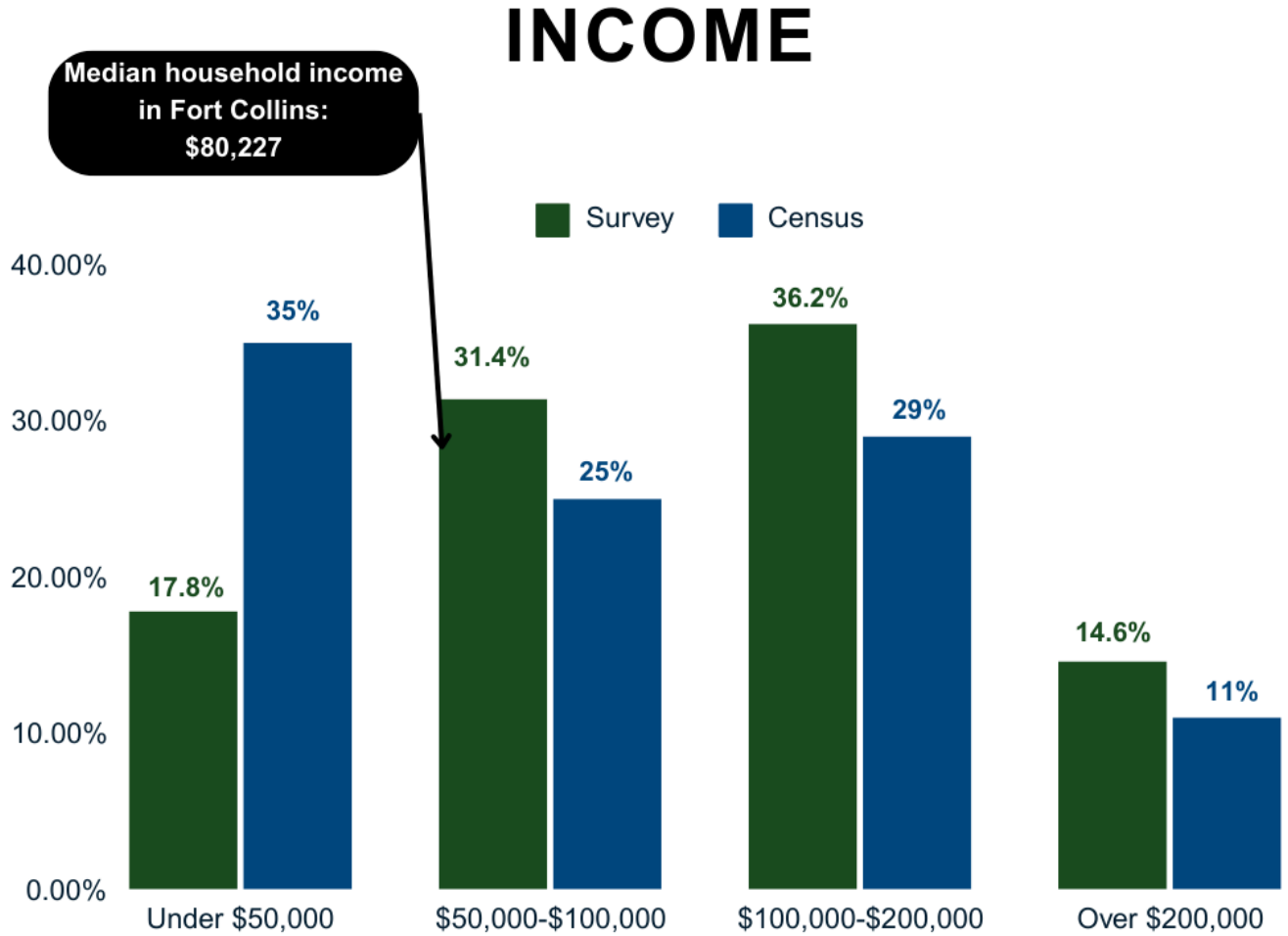


Figure 4. Age data reported from 794 respondents.

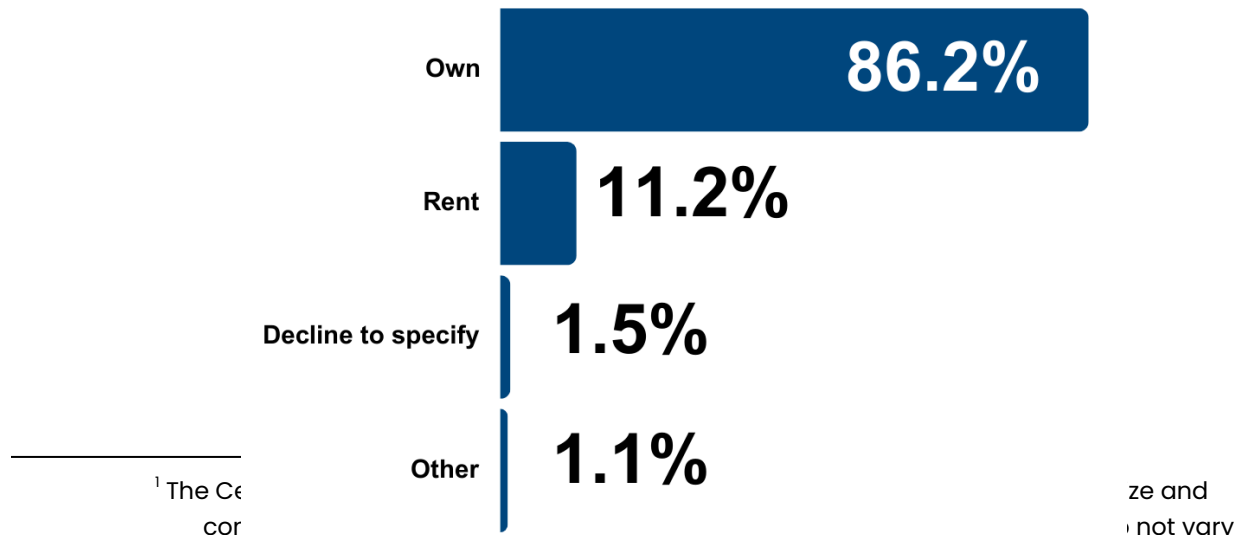
The household income reported by respondents was slightly higher than that of the broader Fort Collins population. According to Census data, the median household income in Fort Collins is \$80,227 and 40 percent of the City’s population reports an income of \$100,000 or more, while 45 percent of the survey respondents reported a household income over \$100,000 (Figure 4).

Approximately 18.1 percent of the Fort Collins population lives in poverty as defined by the Census Bureau.¹ The lower-income population of Fort Collins was largely underrepresented in the survey: about 14.3 percent of respondents reported an income of \$50,000 or less, while Census data shows 35 percent of the Fort Collins population in that income bracket. One important factor for consideration in this survey analysis is the student population at Colorado State University may report in the survey as low-income, particularly because Utilities specifically recruited respondents at a campus event. However, most students' experiences likely differ significantly from those of the non-student low-income community members and the survey analysis may lack representation from the latter.

Housing Status

Only 11.2 percent of respondents identified as renters, while 86.2 percent identified as homeowners (Figure 5). However, according to the Census Bureau data, the homeownership rate in Fort Collins is 51 percent, indicating a significant gap in the survey's reach with renters.

DO YOU OWN OR RENT YOUR RESIDENCE?



¹ The Ce
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not vary

geographically, but they are updated for inflation using the Consumer Price Index (CPI-U). The official poverty definition uses money income before taxes and does not include capital gains or noncash benefits (such as public housing, Medicaid, and food stamps).

Figure 5. Housing status data reported from 797 demographic survey respondents.

Residency in Fort Collins

Half of the respondents reported being long-time Fort Collins residents of at least 20 years. As shown in Figure 6 below, the second largest percentage of respondents reported living in the City for between 6 and 10 years, and a close third group reported being recent residents of Fort Collins.

LENGTH OF RESIDENCE IN FORT COLLINS

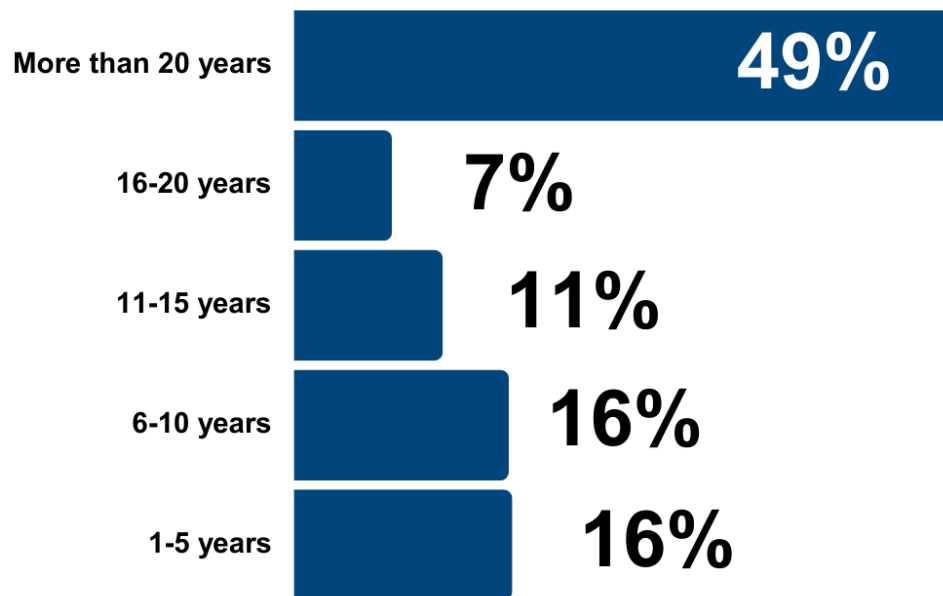


Figure 6. Residency data reported from the 796 demographic survey respondents.

SURVEY DEVELOPMENT AND DISTRIBUTION RECOMMENDATIONS

Demographics

Lotus identified several demographic gaps in the survey's respondents that may best be reached by other engagement tactics such as focus groups or one-on-one interviews. These include:

- Hispanic residents.
- Black residents.
- Asian residents.

- Non-student renters.
- Small business owners.
- Non-student low-income residents.
- Younger residents.
- Business/organization/institutional customers.

Distribution

Utilities successfully collected a statistically significant number of respondents for the survey's distribution. Many best practices for survey distribution were implemented, including providing paper surveys at frequented community locations (e.g., libraries), tabling at community events, meeting customers where they are (e.g., attending a student gathering), and offering Spanish language versions.

Utilities collected 40 paper surveys, some of which came from the events, and five Spanish language responses, all of which were received online. While these numbers may appear low relative to the overall response total, **Lotus recommends continuing to provide these alternative distribution channels for maximal accessibility of future surveys.**

The **development of future surveys will benefit from consultation with community leaders** such as the members of the Climate Equity Committee. Their input can help ensure survey language is culturally salient to target demographics. Co-organizing, or tabling at, community events with hard copy surveys can be complemented by Utilities staff administering the survey via conversational interviews. Creating community events where gathering data can occur supports a safe environment in which individuals may be more likely to share information.

Moreover, each iterative planning process and engagement that Utilities undertakes offers an opportunity to continue developing and deepening relationships with community groups. Lotus recommends that Utilities continue investing in these relationships past the planning process and iterating on positive and mutually beneficial entry points and interactions with community members. This will ensure Utilities can draw on partnerships with organizations to support the development and distribution of future surveys

into communities that are currently underrepresented in this survey. These relationships can also lead to data of higher and deeper quality through focus groups or informational interviews.

SURVEY RESULTS

CONCERNS RELATED TO WATER USE

Survey respondents were asked about their primary concerns related to water use out of a list of 11 options. The top five concerns are shown in Figure 7 below.

WHAT ARE YOUR PRIMARY CONCERNS RELATED TO WATER USE IN FORT COLLINS?

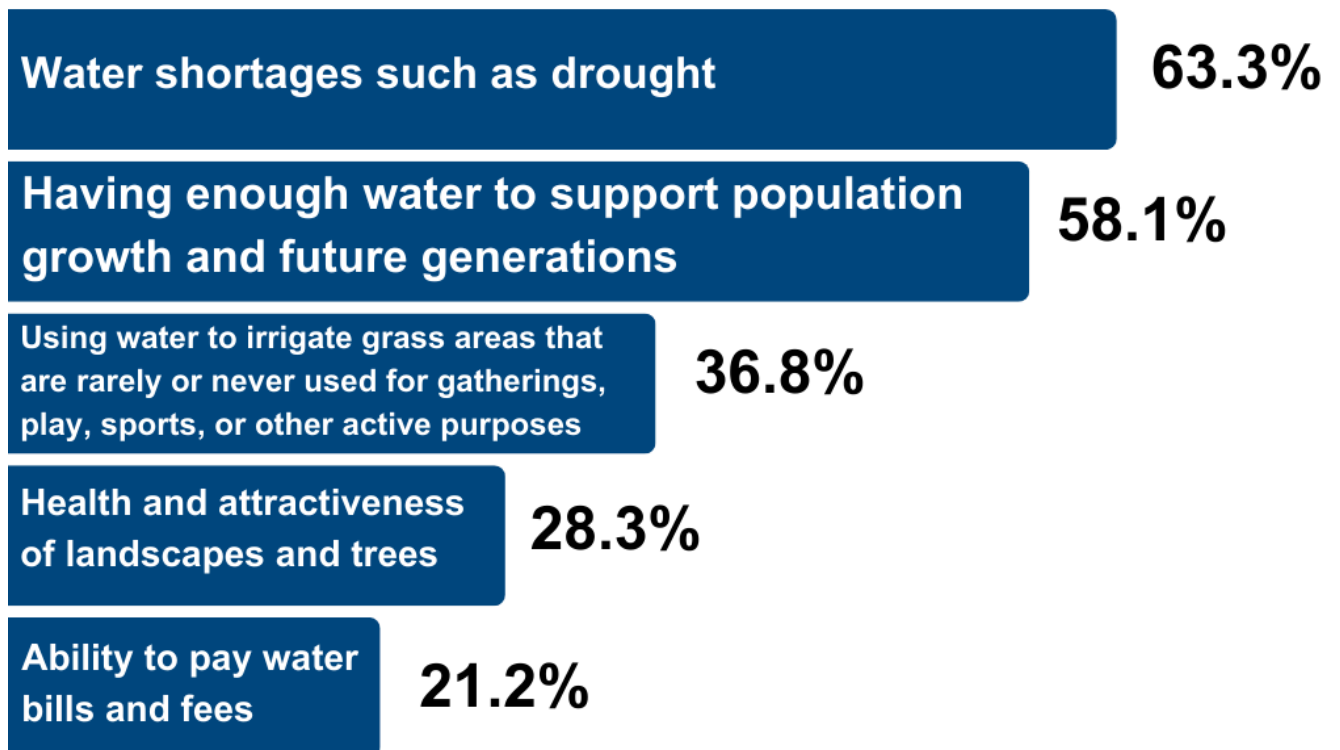


Figure 7. Respondents were asked to select up to three most important concerns related to water use in Fort Collins. The five options in the figure above garnered the most selections.

Almost two-thirds of respondents (64%) who answered this question reported both of the top two concerns, “water shortages such as drought” and “having

enough water to support population growth and future generations.” This strongly suggests that the two concerns are linked – that respondents may believe water shortages will worsen with population growth. These concerns were shared across all demographic groups, including race, age, and income.

Respondents were almost universally concerned about water in some way; only one percent reported not being concerned about water. Furthermore, only 40 respondents cited distrust in their water utility, suggesting their priority concerns about water focus heavily on the messages of scarcity that have dominated Colorado in recent years rather than people’s perceptions of individual utilities.

One hundred and twenty respondents also took advantage of the option to add issues that were not included in the original list of 11. Themes from these self-reported concerns include:

- The water required to support ongoing and future developments and population growth.
 - A couple of comments cited incentives, permits, and the number of ongoing building projects that seem to encourage and promote population growth.
- Rate structure.
- Water/watershed quality and ecosystem health.
- Nature/plant health and overuse of turf in landscapes.

RESPONDENTS’ POTENTIAL TO TAKE ACTION

Individual Water Use Reduction

Survey respondents were asked if they were willing to take action to reduce water use in the next year (Figure 8). The responses revealed the following:

- 63.5 percent said they are willing to take action to reduce water use in the next year.
- 20 percent said no, as they believed they had already taken many actions and used water efficiently.
- The remaining respondents selected that they did not know or would probably not take action.

ARE YOU WILLING TO TAKE ACTION THAT REDUCES WATER USE IN THE NEXT YEAR?

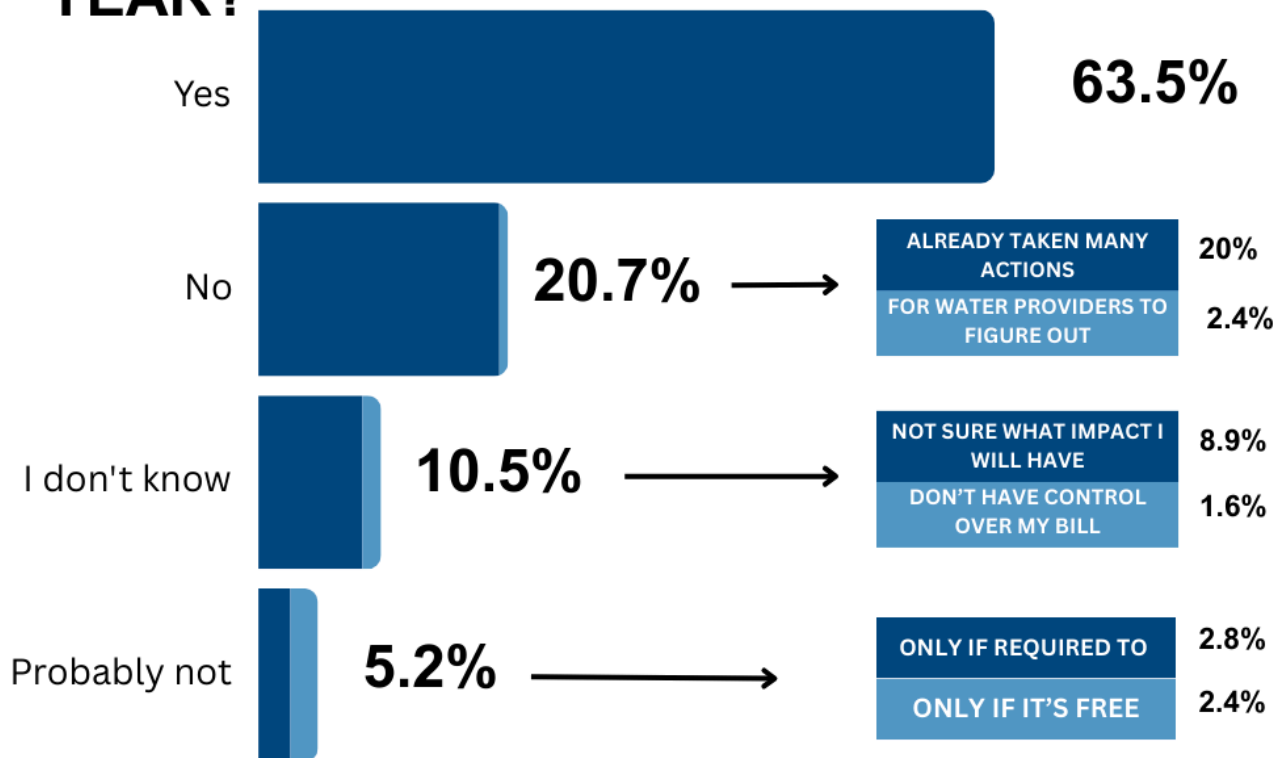


Figure 8. Respondents' willingness to take individual action to reduce water use in the next year.

Survey respondents were also asked about their willingness to accept new, required actions that limit how or when people use water on lawns. The responses revealed the following (Figure 9):

- 51.3 percent said they'd be very willing to, every summer, accept new required actions that limit how or when people use water on lawns.
- 8.4 percent said they wouldn't be willing to take action.

HOW WILLING ARE YOU TO ACCEPT NEW, REQUIRED ACTIONS THAT LIMIT HOW OR WHEN PEOPLE USE WATER ON LAWNS?

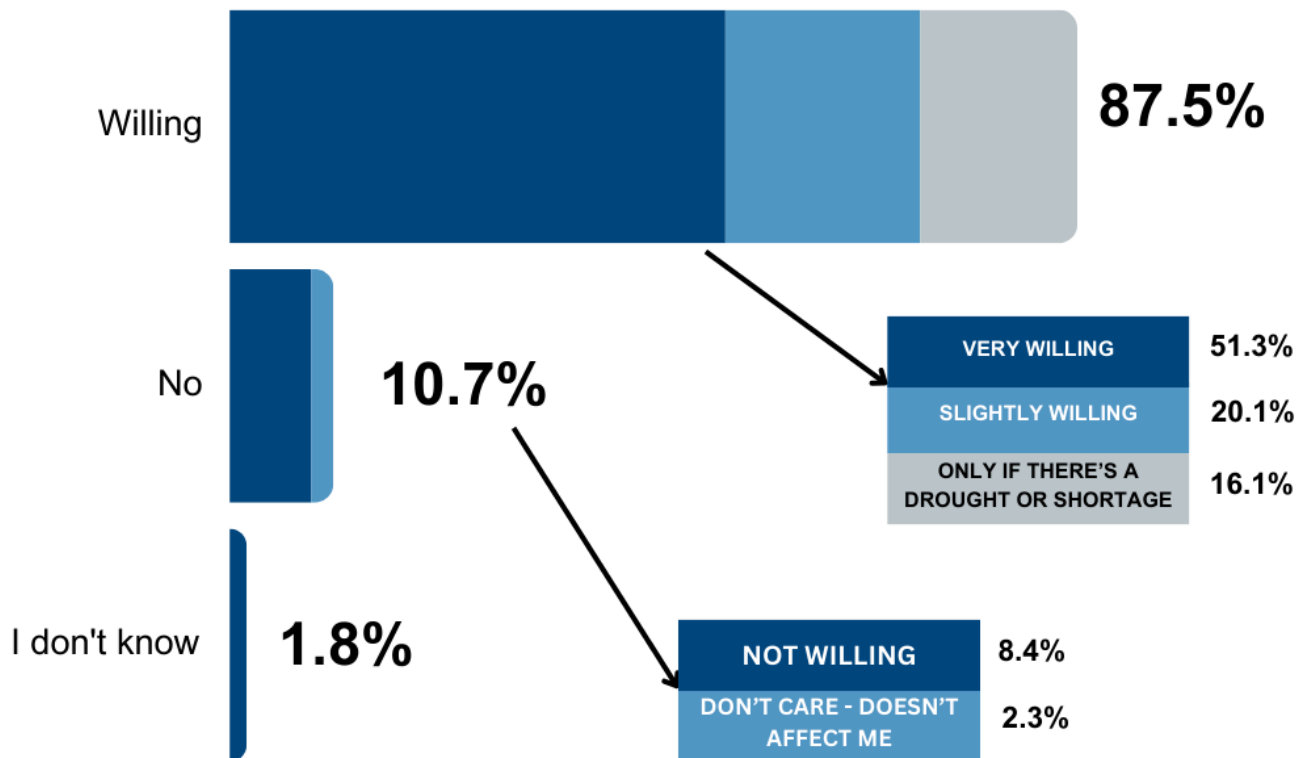


Figure 9. Respondents' willingness to accept new, required actions that limit how or when people water lawns.

THEORIES OF CHANGE

Rental Property Owner Requirements

Survey respondents were asked if they believed rental property owners should be required to make upgrades to improve indoor or outdoor water efficiency. The responses revealed the following:

- 56.4 percent of survey respondents believe that rental property owners should be required to make upgrades to improve indoor or outdoor water efficiency.
- 22.1 percent agreed with the sentiment, as long as it didn't increase rental costs.

When assessing this question against housing status, 58 percent of homeowners supported requirements for rental property owners, and 22 percent supported, contingent on not increasing rental costs. As shown in Figure 10, renters demonstrated the highest percent support for the requirement contingent on not increasing rent.

SHOULD RENTAL PROPERTY OWNERS BE REQUIRED TO MAKE UPGRADES TO IMPROVE INDOOR OR OUTDOOR WATER EFFICIENCY?

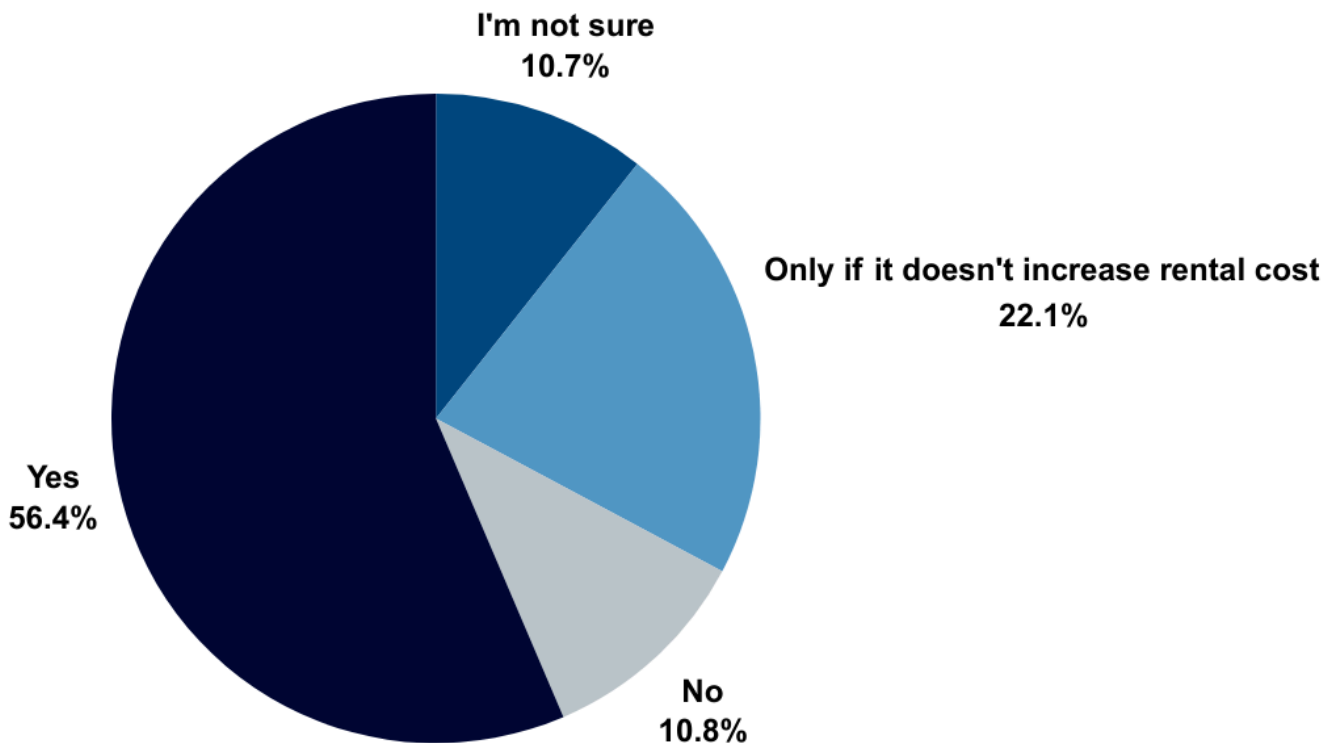


Figure 10. Respondents' beliefs on whether property owners should be required to make upgrades to improve indoor or outdoor water efficiency.

Balance of Incentives and Regulations

Survey respondents were asked how Utilities should balance voluntary incentives, rules/regulations, and shortage-spurred usage restrictions. The responses in Figure 11 revealed that most respondents believed in a balance between voluntary and mandatory policies:

- 66 percent of the survey respondents said Utilities should balance voluntary incentives, rules/regulations, and shortage restrictions by using a mix of voluntary incentives and rules and regulations, leading to occasional water shortage restrictions.
- The remaining respondents were split between wanting Utilities to rely more heavily on rules and regulations and on voluntary incentives.

HOW SHOULD UTILITIES BALANCE VOLUNTARY INCENTIVES, RULES/REGULATIONS, AND SHORTAGE RESTRICTIONS?

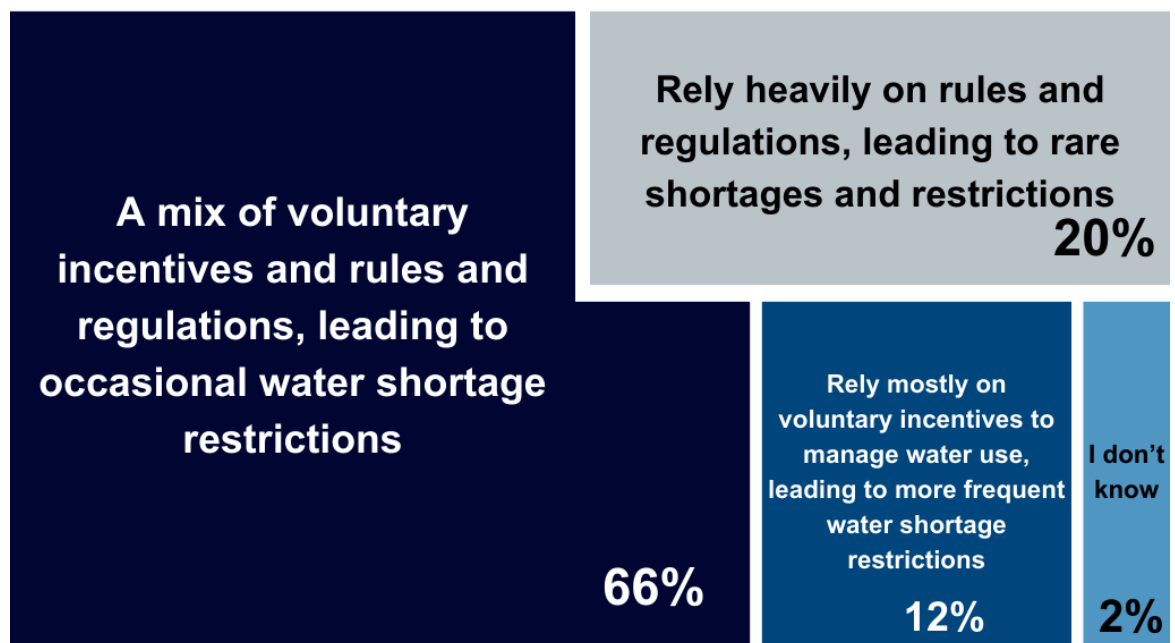


Figure 11. Respondents' beliefs on whether property owners should be required to make upgrades to improve indoor or outdoor water efficiency.

Survey respondents were also asked if they believed voluntary incentives led to effective water conservation in Fort Collins. Interestingly, over half of respondents believed that voluntary incentives lead to somewhat effective water conservation in the community (Figure 12). This supports the strong desire for a mix of voluntary incentives and rules and regulations in Figure 11 above. Sixteen percent believed voluntary incentives work well, while nine percent did not believe that voluntary incentives work to conserve water and seven percent of respondents reported that voluntary incentives only work well if free. A relatively high number of respondents, 12 percent, reported not knowing. The two least popular options are also the most definitive answers which – combined with the high number of “I don’t know” responses – suggests an uncertainty in the public’s view of the effectiveness of incentives.

DO YOU BELIEVE VOLUNTARY INCENTIVES LEAD TO EFFECTIVE WATER CONSERVATION IN OUR COMMUNITY?

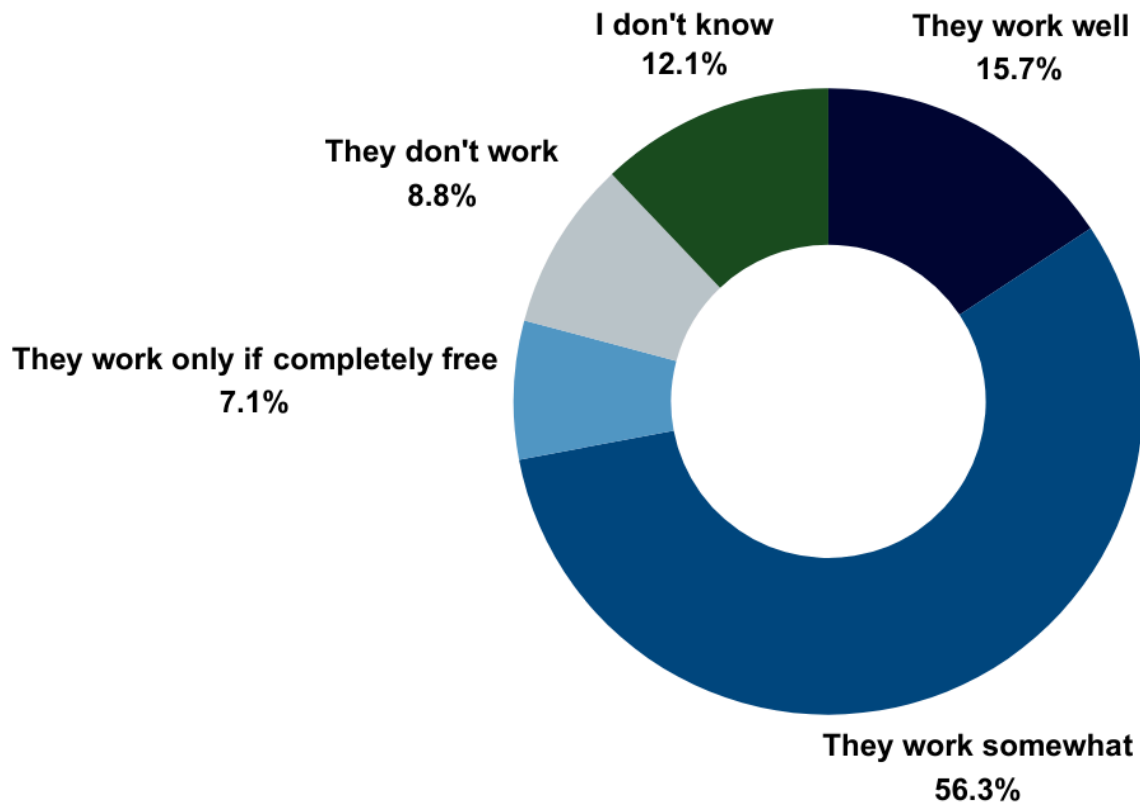


Figure 12. Respondents' beliefs on whether voluntary incentives lead to effective water conservation in Fort Collins.

The following question revealed nuance in respondents' opinions on voluntary incentives and mandatory requirements. In Figure 13 below, respondents preferred differing approaches for the various audiences and use cases offered. Broadly, respondents favored a more incentive-based approach for existing residential properties and their outdoor functional spaces. However, respondents favored a more regulatory approach for new residential and commercial developments, as well as outdoor spaces not used for functional activities.



SHARE THE APPROACH YOU THINK IS RIGHT FOR THE FOLLOWING OUTDOOR USES

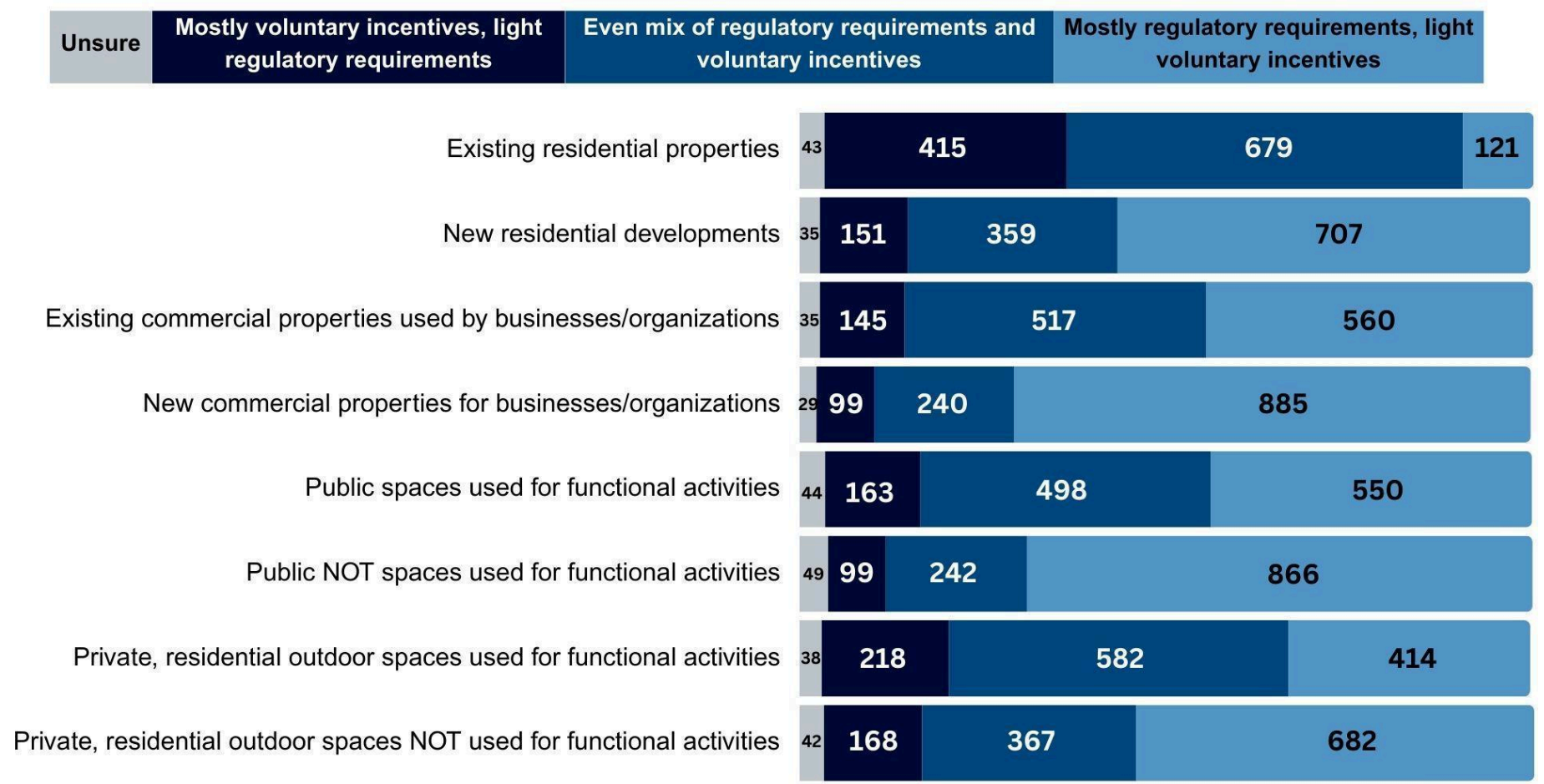


Figure 13. Respondents' beliefs on the right approach for the mentioned outdoor uses in Fort Collins.

Programs

Survey respondents were asked what water conservation programs they would participate in if those programs were free or if they were offered financial assistance to participate. Respondents were allowed to select up to three out of 11 options – the results of which are shown in Figure 14. The top three that were identified were the following:

- 52 percent said programs that remove turf grass and replace it with drought-tolerant plants.
- 48 percent said programs that swap outdoor irrigation equipment for more efficient models.
- 37.9 percent said programs that change out indoor fixtures with more efficient models.
- Respondents representing a business or both resident and business supported the same three programs:
 - One quarter of business respondents wanted a turf replacement program.
 - Thirty percent of business respondents supported outdoor equipment swaps.
 - Just under one quarter of business respondents selected indoor fixture swaps.

The three least popular programs were:

- Five percent said to review brochures or websites with information about how to use less water.
- 4.8 percent said to sign up for monthly text messages with irrigation recommendations.
- 4.3 percent said to add submeters to understand specific water use.



IF ANY OF THE FOLLOWING WERE OFFERED FOR FREE OR WITH FINANCIAL ASSISTANCE, WHICH WOULD YOU CONSIDER PARTICIPATING IN?

None

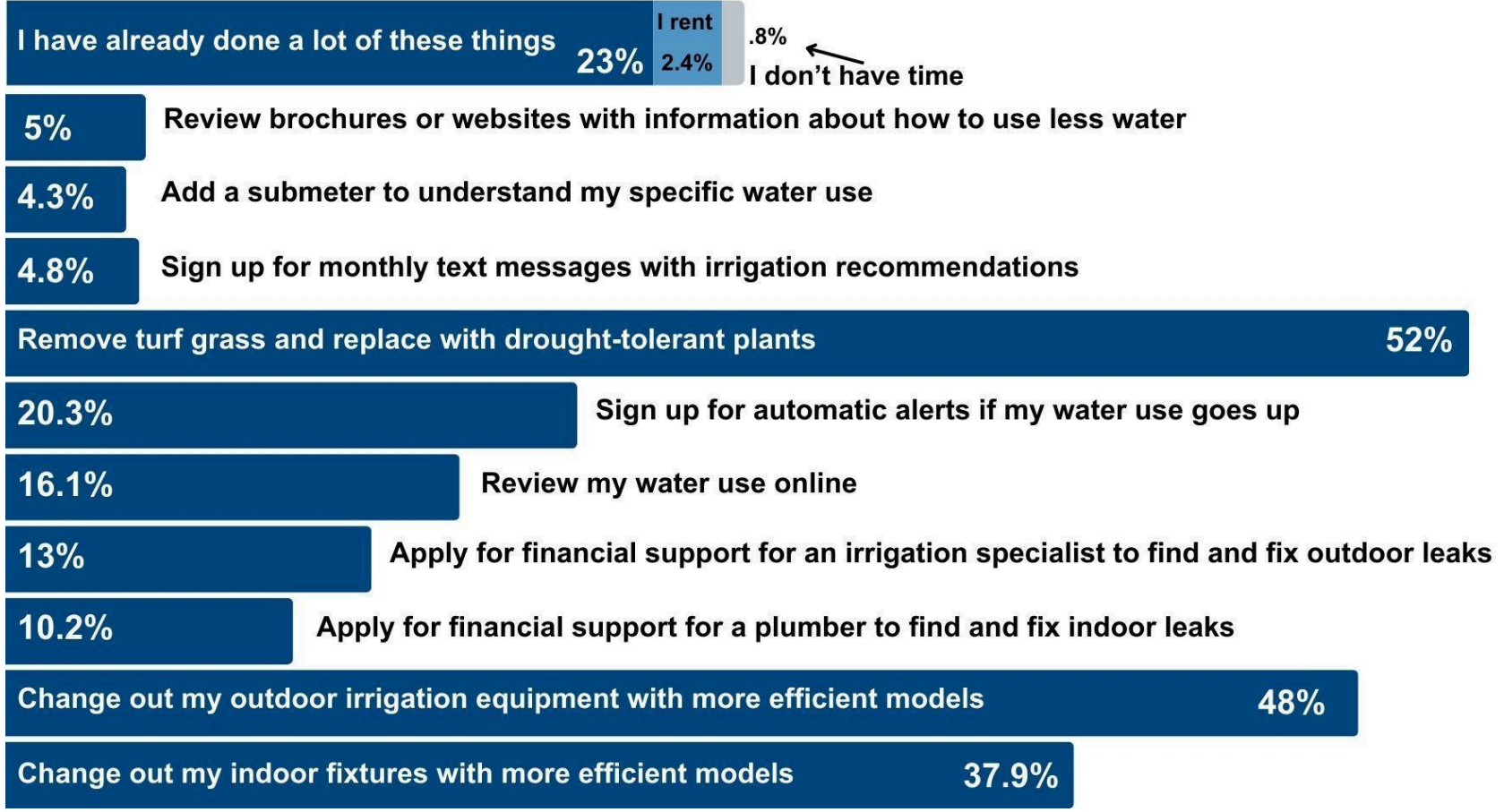


Figure 14. Programs that respondents would participate in if they were offered for free or with financial assistance.

ANALYSIS OF OPEN-ENDED RESPONSES

Respondents were also asked two open-ended questions at the end of the survey: 1) share what came to mind when thinking about equity and how it relates to using water in Fort Collins, and 2) share ideas on types of water conservation programs they thought Utilities should offer, or ways Utilities could improve existing programs. The responses were compiled into key themes and divided into challenges and solutions.

WATER EQUITY

The responses to the first open-ended question illustrated a broad lack of consensus on the definition of the word “equity” in this situation and the role that the concept should play in Utilities’ work and approach to service. Many respondents (approximately one-third) discussed the structural and systemic challenges to water efficiency and conservation: that certain demographic groups such as renters, low-income residents, and non-English speakers may require more dedicated investment and programming to support their access to clean affordable water and water conservation and efficiency tools. These responses often connected their acknowledgment of these challenges with the function they see that Utilities could offer in reducing those challenges.

“This is a hard question to answer. If we want all customers to receive the same high level of service, regardless of their background, then this shouldn’t matter.”

- Survey Respondent

Others (slightly over one-quarter of respondents) responded critically to the question, suggesting that Utilities’ focus on “equity” is misguided, even unfair. These responses preferred to treat all customers the same, believing that targeted programs would draw attention and resources away from others, the community as a whole, or the overarching problem of water overconsumption. Some expressed more ambiguous statements along these lines, around the desire to ensure everyone has “equal” and “fair” service and “enough” water. These varied responses reflect the ongoing and broader debate at Utilities and elsewhere in the community regarding **equity versus universality** and the

challenge of balancing equity with more universal conservation efforts. Survey responses that expressed the universality perspective suggested respondents' belief that perhaps the most cost-effective and impactful water conservation opportunities lie outside low-income residential communities. Others acknowledged that for some low-income or equity priority communities, water conservation is not necessarily a goal. A couple respondents provided an example of this nuance: mitigating the inequitable tree canopy coverage in some low-income communities may increase water demand in these communities. However, expanding the tree canopy provides many other much-needed co-benefits such as reducing urban heat island effect and improving water and air quality.

CHALLENGES

- **Affordability and Accessibility:** The most frequently mentioned equity issue dealt with the cost of water efficiency and conservation. Wealth fundamentally offers high-income customers freedom of choice in how much water they use. These customers can typically afford projects or technologies that help them reduce their water use, which may be out of reach for lower-income customers. Lower-income customers, on the other hand, were perceived to struggle more to afford basic water bills and/or efficiency upgrades, limiting their ability to use less water. Additionally, water use restrictions or overuse penalties may have a greater proportional impact on lower-income customers.
 - **Renter Autonomy:** Concerns arose around the ability of renters who do not have sole control over their water usage to participate in programs. From a structural perspective, renters lack access to many of the decisions that determine how efficient or conservative they can be with water: metering practices tie multiple customers and irrigation water to a single bill, and appliances and equipment that use water are often selected by landlords.
 - **Outdoor Water Use:** Many respondents noted that wealthier customers are more likely to have outdoor irrigation needs such as lawns and thus flagged excessive outdoor water use as an equity concern. Respondents appeared to value outdoor water use somewhat lower

than indoor water use, perhaps due to the perception of the high quantity and more aesthetic function of outdoor water use. On the other hand, low-income households are more likely to rent and thus not able to control how much outdoor water is used.

- **Upgrading Fixtures and Appliances:** Many survey respondents observed that water efficiency and conservation technologies may be cost-prohibitive for low-income residents, or disallowed for renters whose landlords are responsible for the infrastructure of their rental units.
- **Program Accessibility:** Some respondents expressed dissatisfaction with the current rebate programs, noting that the programs are too complex or time-consuming. These barriers may disproportionately dissuade low-income customers from participating in such programs.
- **Sustainable Population Growth:** Frequently discussed in the survey responses was the topic of development and population growth. Many respondents associated a concern with the growing population with their perceptions of dwindling water resources and felt that current trends in population growth were unsustainable to the future water supply. Respondents feared that water demand in new developments would reduce the amount of water available to the legacy population. Others emphasized the need for more sustainable water management practices and regulations in order to accommodate growth.
 - **Existing Policies and Practices:** Although not within Utilities' sphere of influence, some respondents criticized the City of Fort Collins policies that were perceived to encourage growth too freely. These respondents wanted to see limitations and restrictions on new developments. Other existing systems or policies, such as legacy water rights and developer practices, were also seen to perpetuate inequities in water usage.
- **Limited Impact of Individual Actions:** Some responses identified the problem of reducing community water use as a collective action and systemic challenge. Focusing solely on individual water conservation efforts is not enough, according to these respondents, and many felt unsure about how

impactful their actions were in contributing to the overall community's water consumption.

- **Transparency in Water Usage:** Some respondents highlighted the systemic lack of transparency in customers' water use, referencing metering practices and Utilities' infrastructure as challenges to customers' abilities to reduce water consumption.
 - **Leak Detection and Repair:** Respondents pointed to aging and/or leaky infrastructure which wastes water that is connected not to customer usage but to a failure to maintain water mains and pipes.
 - **Water Metering:** Some respondents noted that not all properties or individual units have meters, creating challenges for renters and condominium owners in particular to track unit-by-unit water usage. Although tiered rate structures were sometimes offered as a solution, existing water metering practices may present barriers to implementing these rates equitably.
- **Cultural Norms and Expectations:** Some respondents observed that certain community members, particularly wealthy homeowners with ample outdoor space, seem to prefer the aesthetics of traditional lawns. Perhaps fed by unfamiliarity with alternatives, a few respondents also expressed personal experiences with the high upfront cost and ongoing maintenance requirements of xeriscaping and low water use landscape conversions.

SOLUTIONS

Across respondents who completed the open-ended questions, several solutions-oriented themes can be drawn, highlighting the need for a sweeping, comprehensive approach to reducing the City of Fort Collins's water consumption. The solutions proposed supported an array of strategies and tools that tackle affordability challenges, address conservation major conservation opportunities, and ensure fairness for all residents.

Overarching Themes

- **Importance of Broader Solutions:** As discussed in the section above, many survey responses recognized the complexity of the City's water supply and demand, as well as the limitations of their own personal

understanding and knowledge of solutions. However, this allowed these responses to point toward systemic solutions to the issues that make water conservation difficult for both the community overall and for equity-priority communities, namely renters and low-income households.

- The **community-wide** ideas included calls to focus conservation efforts on institutional and commercial water users, change development policies, build more water storage, and assess regulations, codes, and the rate structure for opportunities to incentivize lower usage. Broadly, the thread of easing the burden on individuals connects these various solutions; for example, many responses sought stricter code requirements that would entrench conservation and efficiency into new developments.
- For **equity-priority communities**, survey respondents similarly wanted to ease the burden of individual actions, reduce the stress of enforcement, and solve the split incentive problem between landlords and tenants. Several suggested assessing penalties proportionately to income or on a per capita rather than household water usage basis, as lower-income residences may include more members in a household than wealthy communities. Another idea was to repair leaks and infrastructure in low-income neighborhoods first. The responses often acknowledged housing unaffordability as an impediment to saving water for many low to middle-income households in the City.
- **Balance Between Regulations and Incentives:** This discussion of systemic solutions leads to another major theme in the responses: the impactfulness and, by extension, appropriate balance of regulations and voluntary incentives. In accordance with the results in Figure 12, respondents disagreed on whether they wanted to see Utilities implement more regulations or incentives to most effectively promote conservation and efficiency. Slightly less than one quarter of open-ended question respondents supported some kind of rule,

regulation, or restriction while about one-third favorably discussed various financial assistance programs or incentives. This suggests that respondents may give a slight preference to voluntary incentives but that a mix of both would likely resonate with the community broadly.

- **Targeted Regulations and Incentives:** Aligned with the sense that residential customers face enough burden to conserve water, many responses suggested that Utilities should focus their attention and regulatory capacity on large water users. Common targets across suggestions for both incentives and regulations included homeowners associations (HOAs), new development, large commercial or industrial users, parks and golf courses, and the municipal government itself. Similarly, some also wanted to see stronger enforcement and rules for wealthier neighborhoods that were assumed to use more water than equity-priority communities.
- **Detractors:** A minority of responses disagreed with regulatory, and sometimes even incentive-based, approaches. These thematically centered around the idea of smaller government.

“With growth comes the opportunity to implement better equipment to reduce water consumption so I don’t see any problems in requiring new builds both residential and commercial to install water saving features and equipment. That’s good planning and equitable for the future.”

- Survey Respondent

Utility Policies and Programs

- **Addressing Homeowners Association and Landlord Responsibilities:** Several respondents observed the importance of addressing water conservation and efficiency with landlords and HOAs, as many customers’ water usage are beholden to their landlords’ decisions and HOA policies. Suggestions for solutions to these issues included charging landlords overuse fees, developing policy mechanisms to prevent landlords from passing costs on to tenants, and offering them

incentives and programs to increase efficiency and conservation efforts in their rental units. Similarly, several respondents expressed frustration with HOAs promoting water intensive landscaping: complaints about HOAs comprised over 10 percent of the open ended survey responses. Most of these proposed banning HOA requirements for turf lawns and to promote rather than prevent xeriscaping and other water efficient landscaping practices.

- **Communications, Engagement, and Education:** Many respondents highlighted the importance of clear communication from Utilities and educational programs or campaigns to encourage conservation. Similarly to the above, equity priority communities, HOAs, and major water users were commonly mentioned as target audiences for education and engagement. Equity-priority or non-English-speaking communities may require different types of communication or education, such as culturally relevant, in-language materials or campaigns to raise awareness of income-qualified Utilities assistance programs and resources. Some respondents wanted Utilities to host workshops on home water-saving practices or bring educational sessions to HOAs. One suggested highlighting successful water conservation efforts by residents through neighborhood tours or recognition programs.
 - **Transparency:** Related to the theme of clear communication was the concept of transparency and the importance of providing clear water use data. Several respondents talked about the challenge of conserving water when not knowing their baseline water use or understanding the effectiveness and impact of their efforts. Some suggested that because some buildings do not have individual unit meters or landlords or HOAs pay the utility bills, that more granular water usage data could help identify water saving opportunities for individuals, locate leaks, and reward water efficient customers. Often this was discussed relative to other residences, the City's watering practices, major commercial water users, and HOAs;

respondents wanted to know what entities are using the most water and how their own usage compares.

- **Tiered Water Rates:** Responses split on support for a tiered water rate structure: some felt that the tiered structure may punish large families or seemed unfair conceptually while others saw this mechanism as one of the only meaningful ways to ensure major water users faced consequences for their profligacy.
- **Water Efficiency and Conservation Programs:**
 - **Xeriscaping:** Water efficient landscaping was a popular topic in the open-ended responses. Many respondents wanted better policy support, particularly with HOAs, for replacing turf lawns and robust incentive programs for residential and commercial customers alike to reduce the perceived cost barrier to installation of xeriscaping. A couple responses cited burdensome or complicated regulatory or permitting processes as a barrier as well.
 - **Public Spaces:** Several respondents wanted to see the City lead by example and convert their landscaping to native plants and xeriscaping in public parks, medians, and other public landscapes.
 - **Water-Efficient Technologies:** Common to many responses was an embrace of programs that incentivize water conservation technologies like low-flow toilets and showerheads, smart irrigation systems, and leak detection devices. Many acknowledged that these technologies may be financially out of reach for equity-priority communities, and others cited their own experiences with existing Utilities programs as important steps toward saving water at home. Audits, financial assistance or subsidies, and fixture or appliance replacement programs were popular suggestions in this category.
 - **Reuse and Greywater:** A few responses supported policy changes to enable individual water collection or to promote reuse and greywater systems.

respondents tended to look towards other groups in which action could occur; hence the support for stricter requirements for landlords, new developments, and public spaces.

Policy Recommendations

Ultimately Utilities must continue to be strategic about introducing a balance of voluntary and mandatory tools. **Respondents slightly leaned towards a more incentive driven approach, especially for residential customers.**

Utilities should consider developing a range of programs targeted to various audiences (e.g., equity priority communities, landlords, HOAs, etc.) accompanied by ongoing investments into relationship building and bolstering communications capacity. Pairing these aspects will promote uptake in the target audiences as well as broadcast to the community the steps that Utilities is taking to advance conservation and efficiency.

Respondents supported the use of carefully targeted restrictions or progressive rate tiers for large water users, new development, and the City's water users. This was accompanied by broad support for policy changes that assign greater responsibility to landlords and HOAs to facilitate water efficiency, by removing HOA bans on xeriscaping or preventing landlords from passing costs of efficiency upgrades onto tenants. Respondents generally agreed to use enough water to maintain private and public functional spaces but showed far less tolerance for water uses considered not functional and for new developments both commercial and residential.

Finally, it is important to **continue collaborating with the City's municipal and major commercial water users on conservation practices** and craft messaging that demonstrates to the community that the City "walks the walk" and can be trusted to lead on this critical issue. Respondents' weariness with individual actions suggests a desire to see more institutional leadership in water conservation from the City and public spaces and from commercial entities. These findings offer Utilities and the City a major opportunity to lead by example and **embody the necessary cultural shift in water conservation and landscaping**, with support and interest from the public.

Program and Strategy Recommendations

According to Figure 13 above, the most popular program selected by respondents was the **replacement of turf grass with drought-tolerant plants**, followed by **swapping outdoor fixtures** and then **indoor fixture replacements**. The popularity of outdoor landscaping as a target for water conservation aligns well with respondents' top concerns expressed in Figure 6, as the third most prevalent concern was watering outdoor grass spaces, and with the themes of the open-ended responses, many of which focused on reducing outdoor water use and promoting xeriscaping.

Other notably popular programs from Figure 13 include those that seek to **inform and empower customers to act on their own**, e.g., automatic alerts for water use, seeing water use online, and applying for financial support to fix leaks. These align well with a popular theme in the open-ended responses of communication, education, and transparency as well and speaks to respondents' desire to understand more about their water use and potentially benchmark against other similar users.

- Expanded incentive program to replace turf grass and water intensive landscapes with drought-tolerant plants and xeriscaping.
 - Design education, engagement, and potentially incentive programs, specifically for HOAs.
- Replacement programs to swap inefficient outdoor irrigation systems or fixtures.
- Replacement programs to swap inefficient indoor fixtures and appliances.
 - Design education, engagement, and incentive programs specifically for landlords to empower renters to save water.
- Further exploration of opportunities to practice transparency in community and individual water use, such as dashboards for monitoring meter by meter water use, education or communications on the significance of individual and Utilities water conservation efforts, and reporting on efficient per capita or household use benchmarks and the City's major water users.

APPROACH TO EQUITY

The conflicting responses to the open-ended question about “equity” suggest that **Utilities’ work on “equity” may benefit from hearing more from equity-priority communities in the City to understand how Utilities may wish to define and act on equity in the future and how to communicate that definition and the key issues facing equity priority communities.**

“It is expensive to be poor, and our policies and subsidies should seek to combat this issue. Subsidies and grants should be easily available to help people afford the changes needed to reduce water use – rebates don’t go far enough to help those who cannot afford the up front cost.”

- Survey Respondent

As suggested by the demographic analysis, **equity-priority audiences require different forms of outreach.** Some methods include using cultural brokers who already have established relationships with these communities, offering availability and consistent presence with businesses to engage in conversations and to develop relationships with the owners and staff, finding other framings for equity concepts that could resonate with more people, and identifying preferred social media platforms. **Every audience is different and Utilities must work with its community partners to understand what works best with each audience to ensure the highest success.**

Equity Recommendations

- Conduct specific engagement with equity priority communities to deepen the understanding within Utilities of key issues in these communities.
 - Work with community partners to improve the definition of “equity” for Utilities’ water conservation and efficiency programs and communicate this work to the community.
- Continue investing in building relationships with equity-priority communities and community partners.
 - Consider extending the community consultants’ contracts to ensure their work can continue.

- Offer opportunities that empower community partners to guide implementation such as collaborating to refine the prioritized list of strategies.

Vetting the Equity Evaluation

A critical piece of the Water Efficiency Plan process was the equity evaluation tool developed by Lotus and Greenprint to analyze, revise, and prioritize the Plan strategies. Recognizing the importance of ensuring community shaped how equity was defined and assessed, the team crafted a series of informational interviews with both City staff and community leaders to vet the equity evaluation tool. The project team then adapted the tool and accompanying guidance document to reflect their feedback.

Findings

Generally, the interviews with both staff and community leaders yielded largely similar feedback. Several concrete changes to the equity evaluation process were identified and memorialized in the [guidance document](#), including updates to the evaluation process itself as well as how equity issues are framed. Below is a list of suggestions that were memorialized in the current iteration of the guidance document:

- Build a diverse room of evaluators to complete the evaluation process.
 - Regularly iterate on the rubric with diverse perspectives to continuously improve the process and ensure standardized scoring.
 - Vet the prioritized list with community.
- Transparently document how decisions are made: strengthen the guidance on using the “notes” section so the evaluation captures key tradeoffs and factors that evaluators considered.
- Emphasize relationship building in the guidance and embed this concept in the desired equitable outcomes: is the strategy an opportunity to demonstrate value to community and build relationships?
- Pull demographic and geographic information from Utilities on where customers are struggling and prioritize neighborhoods rather than outcomes and strategies.
 - Develop a systemic equity approach: identify equity priority communities and their challenges, then prioritize strategies that address these challenges.
- Leverage other City engagement efforts such as the City’s Department of Planning and Development landlord outreach programs.

- Define resilience and the desired outcomes of resilience (i.e., what specific challenges and risks is the City seeking to be resilient to, and what end state does the City want to bounce back to).
 - Disaggregate climate resilience from social resilience.

OTHER TAKEAWAYS

The interviews also offered Utilities other suggestions for integrating equity into their operations and planning process.

ENGAGEMENT

- Surveys do not facilitate deeper conversation and are thus ill-suited to capture equity issues and the input of equity priority communities.
- Collaborate with and coordinate messaging across water districts to reduce confusion for residents.
- Involve the agricultural community.
- Focus efforts and resources on supporting multifamily buildings.
- Collaborate with the energy side to get at the energy/water nexus.

PROGRAM AND POLICY DEVELOPMENT

- Reflect different cultural attitudes and practices with program and policy development.
 - This will require Utilities to continually iterate on their messaging and communication styles and figure out what works best for their equity priority communities. Ultimately this also demands an investment into community relationship building and bolstering Utilities' people-centric storytelling capacity.
 - Develop ways to explain why systems are the way they are to community and to Utilities itself. Once this is understood, Utilities can undergo the work of redefining its operations to prioritize equity.
- Water quality is a huge issue in mobile home parks and Utilities should consider developing a water filter program for these customers.
- Overburdened communities will need to use water more as the climate gets worse and/or may sacrifice watering to be able to pay water bills.
 - Conservation and reductions resonate most with people who can afford it.
- There is currently a dearth of good data to adequately support people with disabilities; by improving their understanding of the equity priority communities

they seek to help, Utilities can justify changes to programs and policies to better serve these communities.



Evaluation of Engagement Plan

Generally, Utilities’ engagement plan was well-implemented and achieved several of the goals laid out at the beginning of the process. Table 8 describes the outcomes of the engagement process in terms of how well Utilities met its goals.

Table 8. Progress towards Utilities’ Water Efficiency Plan Engagement Goals.

Measuring Success Towards Engagement Goals			
#	Goal Language	Objectives	Outcomes
1	Design and lead an engagement effort that dedicates 50% of resources toward reaching equity priority and disproportionately-impacted community members throughout the water efficiency planning process.	Develop relationships with key community connectors who can shape the City’s engagement efforts to best reach equity priority and disproportionately impacted community members.	Utilities’ engagement efforts succeeded in reaching equity priority communities, notably in the focus groups and events staff attended and through the Community Consultants program. Although the survey did not succeed in reaching a diverse audience, its administration demanded fewer resources.
2	Boost staff knowledge of and engagement with One Water concepts and the City’s approach by 25% over the course of the water efficiency planning process.	Identify, in partnership with City departments, efficiency and conservation strategies that reflect the interconnectedness of water use and land use planning. Foster deep cross-departmental collaboration	One of the four staff focus groups was designed to explore One water concepts and identify opportunities to strengthen the City’s commitment to One Water



		and planning within the City organization to identify additional ways to reduce City-managed water demand (e.g., parks, municipal buildings).	through the Water Efficiency Plan. Stakeholders invited to this focus group represented several departments.
3	<p>Develop three water conservation and efficiency education opportunities to cultivate community buy-in, and bolster community capacity to engage with the Water Efficiency Plan.</p> <p>Integrate educational One Water messaging throughout all community-facing Water Efficiency Plan update collateral to spread awareness of the City’s approach to One Water.</p>	<p>Develop feedback activities that are interesting and interactive learning experiences and help people to relate to conservation and efficiency benefits.</p> <p>Provide equitable environments to ensure historically excluded community members can participate and feel included.</p> <p>Collect and incorporate broad and diverse feedback from staff, experts, and the community at large to inform water use goals, and conservation and efficiency strategies that consider the entire water cycle, from source to reuse.</p> <p>Develop community engagement strategies that educate and solicit input on the City’s approach to One Water.</p>	<p>The Community Consultants succeeded in cultivating equitable environments to facilitate participation for equity priority communities.</p> <p>Both the Community Consultants and Utilities staff attended a diversity of community events or entered a variety of community spaces to provide learning experiences and solicit feedback.</p> <p>One Water did not appear to be a major focus of engagement.</p>
4	Update all organizational water use goals and conservation and efficiency strategy priorities to incorporate	<p>Develop at least three measurable water use goals specific to City indoor and outdoor water uses.</p> <p>Develop a minimum of two new water</p>	TBD - Utilities input required



	community feedback and City staff needs and processes.	conservation or efficiency strategies to be implemented by the City.	
5	Co-create community water use goals and at least three conservation and efficiency strategies that address existing equity issues, integrate the community’s priorities, needs, and desires, and align with local culture and values.	<p>Develop a list of measurable water use goals that are based in quantitative analysis of current and future water availability and needs.</p> <p>Develop a list of strategies that have measurable water savings aimed at achieving the goals and reducing barriers to participation.</p> <p>Ensure participants understand how community input will inform the plan and ways to get involved and learn more.</p>	TBD - Utilities input required

Suggestions for Future Engagement

Utilities received many suggestions throughout the engagement process for opportunities to improve or build on its engagement efforts. Central to these recommendations is the idea of **reframing engagement from an aspect of the planning process to long-term relationship-building work**. Every engagement should be treated as an opportunity and building block for creating deeper relationships in community. There was a strong desire throughout Utilities’ engagement with equity priority communities for the City generally to center engagement and strategy development around their needs. Participants stressed the importance of identifying groups missing from previous efforts and developing ways to craft culturally relevant, accessible messaging and communications. To adapt a common refrain in public engagement, the community’s feedback suggests that simply “inviting them to the table” misses the opportunity to meet them at their own table.

MESSAGING

Engagement for this Water Efficiency Plan update process revealed a near-universal acknowledgement of the importance of water conservation and efficiency. However, participants still acknowledged a gap between this community understanding and the cultural value placed on water intensive landscaping. Utilities and the City may have the **opportunity to act as a leader in bridging this gap and supporting a cultural shift away from green lawns** and towards an embrace of native, water-wise landscaping: the most commonly suggested communications from participants were greater transparency around the City's biggest water users and what Utilities and municipal operations are doing to lead the community by example.

Data from this engagement process suggests that a more **human-centric approach to communications** is critical to ensuring salience with communities. The analysis identified a significant concern in the community regarding the uncertainty of future water supplies; several suggested that **"preserving water for future generations"** is a framing that resonates with equity priority communities in particular. Other important issues to weave into this messaging and storytelling include **water affordability, fair water pricing, water quality, and preparedness for future water supply changes**. Fairness, rather than equity or justice, may be a more productive framing for a segment of the Fort Collins population: a significant number of survey respondents reacted negatively to the question about equity. This audience does not appear to have been reached by other engagement tactics.

Finally, one important suggestion was to **coordinate messaging across the various water districts** serving the City of Fort Collins to reduce confusion and the sense of mixed messaging.

PRIORITY STAKEHOLDER GROUPS

Three key stakeholder groups were often named throughout the engagement process as potential gatekeepers of this cultural emphasis on water intensive landscaping: **homeowners associations, property managers, and landscaping professionals**. Utilities' xeriscape ambassadors emphasized training and education for landscaping professionals, knowing that homeowners and property managers tend to rely on their expertise for landscaping recommendations. Mobile home park residents, renters, and many other respondents cited limitations set by homeowners associations and landlords as major barriers to incorporating more sustainable landscaping practices. These critical

roles indicate that Utilities may want to dedicate significant resources to engaging these three stakeholder groups.

Relatedly, many indicated that **mobile home park residents** and **low-income renters** face particular challenges in water conservation and efficiency. These stakeholder groups may require unique engagement strategies and special programs that support their efforts to **save water while bolstering their climate resilience**. Similarly, the Spanish speaking community relies on different communication channels and need language access; Utilities should continue their contracts with the **Community Consultants** and deepen its relationship with the **Community Champions**. These two programs can help Utilities iterate on best practices for developing and distributing culturally salient educational materials and programs with various communities.

DATA COLLECTION

Engagement revealed another major factor in ensuring equitable engagement: data collection. Feedback from Utilities' engagement with people with disabilities indicated that local government has largely failed to collect adequate data on this equity priority community, leading to a lack of institutional support for residents with disabilities. An **evaluation of the data on equity priority communities and Utilities' top stakeholder group targets** should be conducted to assess data collection protocols and practices, identify these communities' specific needs, and iterate on salient engagement opportunities.

Relatedly, the demographics of the survey respondents and the equity evaluation interviews suggest that **surveys as engagement tools lack resonance with equity priority communities**. To engage with the communities that Utilities most wants to support, Utilities' focus group approach of meeting communities where they are more effectively collected input and built relationships. Equity evaluation interviewees stressed that Utilities can seek a **balance of quantitative and qualitative data** and more qualitative data can help round out the quantitative and craft a fuller, more three-dimensional picture of the community.

Finally, the equity evaluation interviews underscored the need to **transparently and methodically document Utilities' decision-making processes**. One interviewee suggested that inequities often occur at this stage as decisions bake biases into implementation. The advocates for people with disabilities explained that they often struggled to identify the right decision-maker or staff willing to talk to them; it is often

difficult to discern who makes decisions and how. This practice should extend beyond the equity evaluation process and into other aspects of the Utilities' operations.

Appendix A. Water Efficiency Plan Survey Questions

1. Would you prefer to take this survey in English or in Spanish? Select one to continue.
 - a. English
 - b. Spanish
2. Are you taking this as a resident, or as an organization/business?
 - a. Resident
 - b. Business, organization, or institution
 - c. Both
3. What are your primary concerns related to water use in Fort Collins? (Select up to 3)
 - a. Water shortages such as drought.
 - b. Having enough water to support population growth and future generations.
 - c. Health and attractiveness of landscapes and trees.
 - d. Using water to irrigate grass areas that are rarely or never used for gatherings, play, sports, or other active purposes.
 - e. Lack of rules and regulations about how water is used.
 - f. Too many rules and regulations about how water is used.
 - g. Ability to pay water bills or fees.
 - h. The expense of purchases or changes associated with lowering my water use.
 - i. I don't trust my water utility.
 - j. None of these - I am not very concerned about water.
 - k. Other.
4. Are you willing to take action that reduces water use in the next year?
 - a. Yes - there are things I am willing to do.
 - b. I don't know - I don't have control over my bill, or access to information about how much I use.
 - c. I don't know - I'm not sure what impact I will have.
 - d. Probably not - only if I'm required to.
 - e. Probably not - only if it's free.

- f. No – managing water is for our water providers to figure out.
- g. No – I’ve already taken many actions and use water efficiently.
5. Do you believe voluntary incentives (example: money-back rebates for equipment or landscape changes) lead to effective water conservation in our community?
- I don’t think they work.
 - They work somewhat.
 - They work well.
 - They work only if completely free.
 - I don’t know.
6. How willing are you to accept new required actions (example: regulations and rules) that limit how or when people use water on lawns?
- Not willing.
 - Willing, only if there is a drought or shortage.
 - Slightly willing to do this every summer.
 - Very willing to do this every summer.
 - I don’t care – it wouldn’t impact me.
 - I don’t know.
7. There are many opportunities in Fort Collins to conserve water. Share the approach you think is right for the following outdoor uses:

Approach
Outdoor Uses

Unsure

Existing residential properties

Mostly voluntary incentives, light regulatory requirements

New residential development

Even mix of regulatory requirements and voluntary incentives

Existing commercial properties used by businesses/organizations

Mostly regulatory requirements, light voluntary incentives

New commercial developments for businesses/organizations

Public spaces used for functional activities.
 Example: parks for sports and social gatherings

Public spaces NOT used for functional activities. Example: street medians and parkways

Private, residential outdoor spaces used for functional activities. Examples: HOA common areas for sports or social gatherings

Private, residential outdoor spaces NOT used for functional activities. Examples: HOA or business managed street medians and parkways

8. Thank you for your input! If you would like to go deeper into this topic, we have additional important questions. Select “continue” for more questions. Select “done” to finish now. You can stop at any time.
 - a. Done.
 - b. No more water but I’ll take a quick demographic survey.
 - c. Continue to more water questions.
9. Fort Collins Utilities issues mandatory outdoor water restrictions (mostly limitations on lawn watering) in times of shortage such as drought. In recent years, restrictions have been needed once every 10 years or so. If restrictions were more frequent, how would that impact you?
 - a. I’m not sure.
 - b. A lot.
 - c. Somewhat.
 - d. Not at all.
10. Everyday water conservation may help us avoid water shortages and reduce the frequency of mandatory shortage restrictions. How should Utilities balance voluntary incentives, rules/regulations, and shortage restrictions?
 - a. I don’t know.
 - b. Rely heavily on rules and regulations, leading to rare shortages and restrictions.

- c. A mix of voluntary incentives and rules and regulations, leading to occasional water shortage restrictions.
 - d. Rely mostly on voluntary incentives to manage water use, leading to more frequent water shortage restrictions.
11. Utilities offers water conservation programs to help customers lower their water use. If any of the following were offered for free or with financial assistance, which would you consider participating in? (Select up to 3)
- a. Change out my indoor fixtures with more efficient models (shower heads, toilets, faucets).
 - b. Change out my outdoor irrigation equipment with more efficient models (irrigation controllers, sprinkler heads, hose attachments).
 - c. Apply for financial support for a plumber to find and fix indoor leaks.
 - d. Apply for financial support for an irrigation specialist to find and fix outdoor leaks.
 - e. Review my water use online.
 - f. Sign up for automatic alerts (text or email) if my water goes up.
 - g. Remove turf grass and replace with drought-tolerant plants.
 - h. Sign up for monthly text messages with irrigation recommendations.
 - i. Add a submeter to understand my specific water use (because I live somewhere that doesn't provide me with details on my water use).
 - j. Review brochures or websites with information about how to use less water.
 - k. None - I don't have time.
 - l. None - I rent.
 - m. None - I have already done a lot of these things.
12. People who rent their homes or business spaces can have a hard time lowering their water use because they may not have permission to make changes, may not be able to see the water bill or understand their use, or for other reasons. Should rental property owners be required to make upgrades to improve indoor or outdoor water efficiency?
- a. Only if it doesn't increase rental costs.
 - b. I'm not sure.
 - c. No.

- d. Yes.
13. What would most help you reduce water use at your home or business/organization? (Select up to 3)
- a. If I better understood why using less water matters.
 - b. If I knew how to use less, I would.
 - c. If I could see how much water I use.
 - d. If my fixtures and appliances used less.
 - e. If my landscape didn't need so much.
 - f. If I knew it would reduce my water bill.
 - g. If information was provided in languages other than English.
 - h. If it cost less to make changes to equipment or landscapes.
 - i. If I knew how to fix leaks or could afford a plumber.
 - j. I don't think using less water at my home or business/organization would make much difference.
 - k. I don't know.
14. (OPEN ENDED) What are your ideas for other types of water conservation programs you think Utilities should offer, or ways we can improve existing programs?
15. (OPEN ENDED) In the Water Efficiency Plan update process, we are focusing on equity. Equity means considering individuals' and communities' histories, lived and living experiences, and needs. It also means prioritizing and serving those most marginalized first and with deeper care. When you think about equity as it relates to using water in Fort Collins, what comes to mind?
16. Which communication channels do you prefer for receiving information about water conservation efforts? (Select top 3)
- a. Social media.
 - b. Text message.
 - c. Email: newsletter.
 - d. Email: monthly water use reports.
 - e. Informational videos online.
 - f. Public meetings and forums.
 - g. Direct mail.
 - h. Other (please specify).

17. Thank you for your input!
- a. Done.
 - b. Take me to the demographic survey.
18. Race/Ethnicity (Check all that apply.)
- a. American Indian/ Alaskan Native
 - b. African
 - c. African American/ Black
 - d. Asian/ Asian American
 - e. Hispanic/ Latinx/ Spanish Origin
 - f. Middle Eastern/ North African
 - g. Native Hawaiian/ Other Pacific Islander
 - h. White
 - i. Decline to specify
 - j. Prefer to self-identify
19. Do you own or rent your residence?
- a. Rent
 - b. Own
 - c. Decline to specify
 - d. Other (please describe)
20. Age Range
- a. 15-19 yrs
 - b. 20-29 yrs
 - c. 30-39 yrs
 - d. 40-49 yrs
 - e. 50-59 yrs
 - f. 60-69 yrs
 - g. 70 yrs or older
 - h. Decline to specify
21. Household Income Range
- a. Less than \$10,000
 - b. \$10,000 - \$14,999
 - c. \$15,000 - \$24,999
 - d. \$25,000 - \$34,999

- e. \$35,000 - \$49,999
 - f. \$50,000 - \$74,999
 - g. \$75,000 - \$99,999
 - h. \$100,000 - \$149,999
 - i. \$150,000 - \$199,999
 - j. \$200,000 or more
 - k. Decline to specify
22. Length of Residence in Fort Collins
- a. 1-5 years
 - b. 6-10 years
 - c. 11-15 years
 - d. 16-20 years
 - e. More than 20 years
 - f. Decline to specify
23. Thank you for completing the demographic survey! Please click done.

Appendix B. Survey Analysis Methodology

Lotus Engineering and Sustainability, LLC (Lotus) and Fort Collins Utilities co-created an online survey to gather public feedback on water conservation. The survey is intended to inform 1) the next steps in public engagement, and 2) the development of water conservation goals and strategies for the Water Efficiency Plan update. Lotus proposes the following methodology for analyzing the survey results in this memo.

1. Key Research Questions

- What water conservation and efficiency strategies (e.g., programs, incentives, policies, education) are the public most interested in?
- What are the public's values and sentiments related to equity as it pertains to water conservation and use?
- What are the public's top concerns around water conservation, and how strongly are those concerns held? Will those concerns drive public action?
- What is the public's appetite for mandates versus incentives?
- What are the gaps in public outreach that we would need to fill with the public focus groups?
- What are the potential drivers for individual action on water efficiency?
- What are effective methods for reaching both general and priority audiences?

2. Analysis of Survey Respondent Demographics

Performing a demographic analysis first gives insight into the pool of respondents and will inform how the analysis treats all other responses. Key demographics to analyze include age, household income, race and ethnicity, entity (individual or business), and housing status. These will be compared against Census data to gauge how accurately the survey respondents reflect the Fort Collins demographic profile and identify any missing demographics from the outreach. Then, cross-tabulating demographics with the sentiment analysis will help reveal any correlation between demographics and qualitative responses.

SPECIFIC ANALYSES:

- What was the response rate?
 - Who took the entire water survey and demographic survey

- How many took the long water survey but not the demographics
- How many took only the short water survey and did not go on to additional questions (and did any of those also do the demographics survey?)
- **Methodology:** Calculate the average based on how many responses were received against total views of the survey.
- Who is the average respondent?
 - **Methodology:** Calculate the average age, race/ethnicity, and income bracket of respondents to better understand what type of person the survey is reaching.
- Are these numbers representative of the Fort Collins demographic?
 - **Methodology:** Compare demographic results to the [Fort Collins Census](#) data.
- What groups are missing?
 - **Methodology:** Compare demographic results to [Census](#) data and evaluate the percentage of responders for the entity and housing status questions.
- Where did these groups hear about the survey? Was the survey distributed to all areas in Fort Collins to reach as many residents as possible?
 - **Methodology:** Review marketing analysis for information on where the site visits came from and evaluate where the paper surveys were distributed.
- Are there any patterns in the demographic data? Anything that doesn't make sense?
 - **Methodology:** Synthesize the above data analyses into a comprehensive story of who is responding to the survey and who is not.
- Is the sample size statistically viable?
 - **Methodology:** Determine the statistical significance and margin of error of the sample size of survey respondents as a whole and specific demographics, as desired.

3. Sentiment Analysis

The sentiment analysis is intended to identify the survey respondents' top priorities and concerns regarding water conservation and efficiency. Through the analysis,

Lotus will draw insights into individuals' willingness to take personal action and their expectations for action on behalf of the City and Utilities. A [preliminary analysis](#) lent visibility into the performance of ongoing outreach efforts but will be updated according to this methodology.

SPECIFIC ANALYSES

- What key themes are emerging regarding the public's concerns and priorities? How strong are the trends in thematic concerns or priorities? Do trends point towards willingness to act individually? Do trends provide information that we can use to guide water conservation goals, strategies/programs, and/or equity criteria?
 - **Methodology:** Code responses through ChatGPT or Gemini to identify key themes from survey results (top 5 trends and categories of responses, for example). Analyze the number of responses that included key themes/words. Cross-check AI analyses with survey responses.
- Do responses differ by subgroups? Do trends in responses correlate with demographics?
 - **Methodology:** Run a cross-tabulation that lays out the subgroups and compare responses to see if there's a difference or not. This will also help identify any correlation between different questions based on the subgroups.
- How has public sentiment regarding water efficiency and conservation changed over time? How might historic program participation correlate with sentiment and can we extrapolate to today's results?
 - **Methodology:** If available, compare historical data to the data from this survey. Use past data to establish benchmarks that Utilities will be able to use in the future. If benchmarks exist, compare those to the current survey results.
- Where do people want to see incentives and where do people want to see regulatory requirements? Is there a pattern or theme to this? Are there any existing regulations in these spaces? What role does Utilities play in these?
- What water conservation strategies are of most interest?

- **Methodology:** Analyze trends in answers to survey questions 6, 11, 13, 14.
- For write-in responses (questions 14 and 15), can Lotus identify examples that are characteristic of general themes? How will the write-in responses be analyzed/summarized?

Survey Evaluation

- Who is the target audience? Was that reflected in the responses?
 - Almost 50% of the respondents are over the age of 60. Why is that? How can younger crowds be engaged to increase participation?
 - **Methodology:** Evaluate where and how the surveys were deployed and the role of area place or method of deployment may play in limiting engagement from other groups.
 - The majority of respondents own their residence, how can renter participation be increased?
- Is the conclusion from the analysis what was expected or not?
- What information regarding the public's priorities and concerns are we missing?
- Are there any limitations to the data collected?
 - **Methodology:** Identify the risk of bias, look into incompleteness of surveys, sample size, and missing data; or if there were any inaccuracies in the data collection process.

Fort Collins Utilities Water Efficiency Plan (WEP) Update

City Council Work Session

Alice Conovitz

Water Conservation Specialist



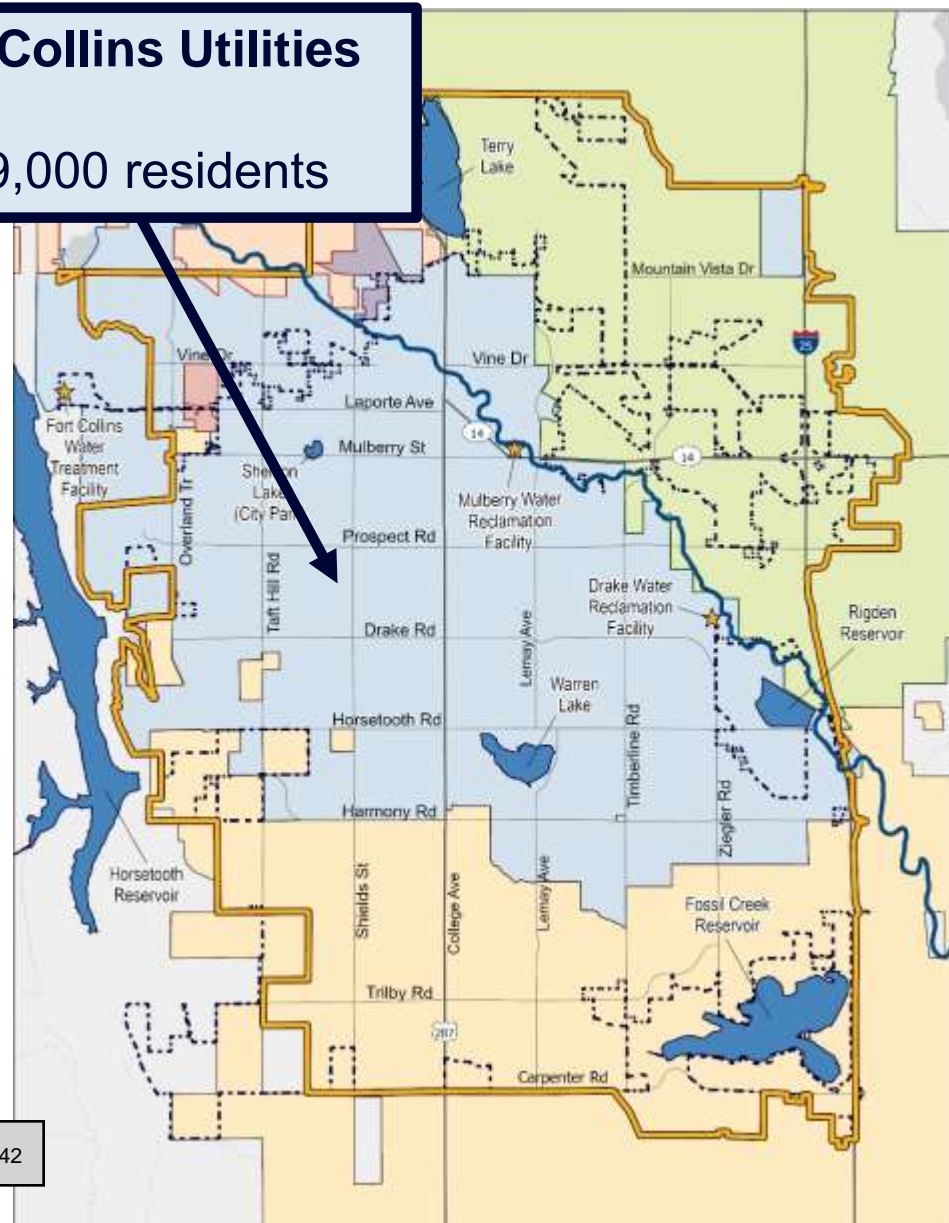


1. Do the proposed conservation goals and strategies align with what you see as our community values?
2. Does the WEP work to-date meet “ambitious but comfortable” guidance?
3. What else does Council need to know prior to staff seeking approval of the updated WEP?

Item 3. **WEP Purpose and Extent**

Fort Collins Utilities

~ 139,000 residents



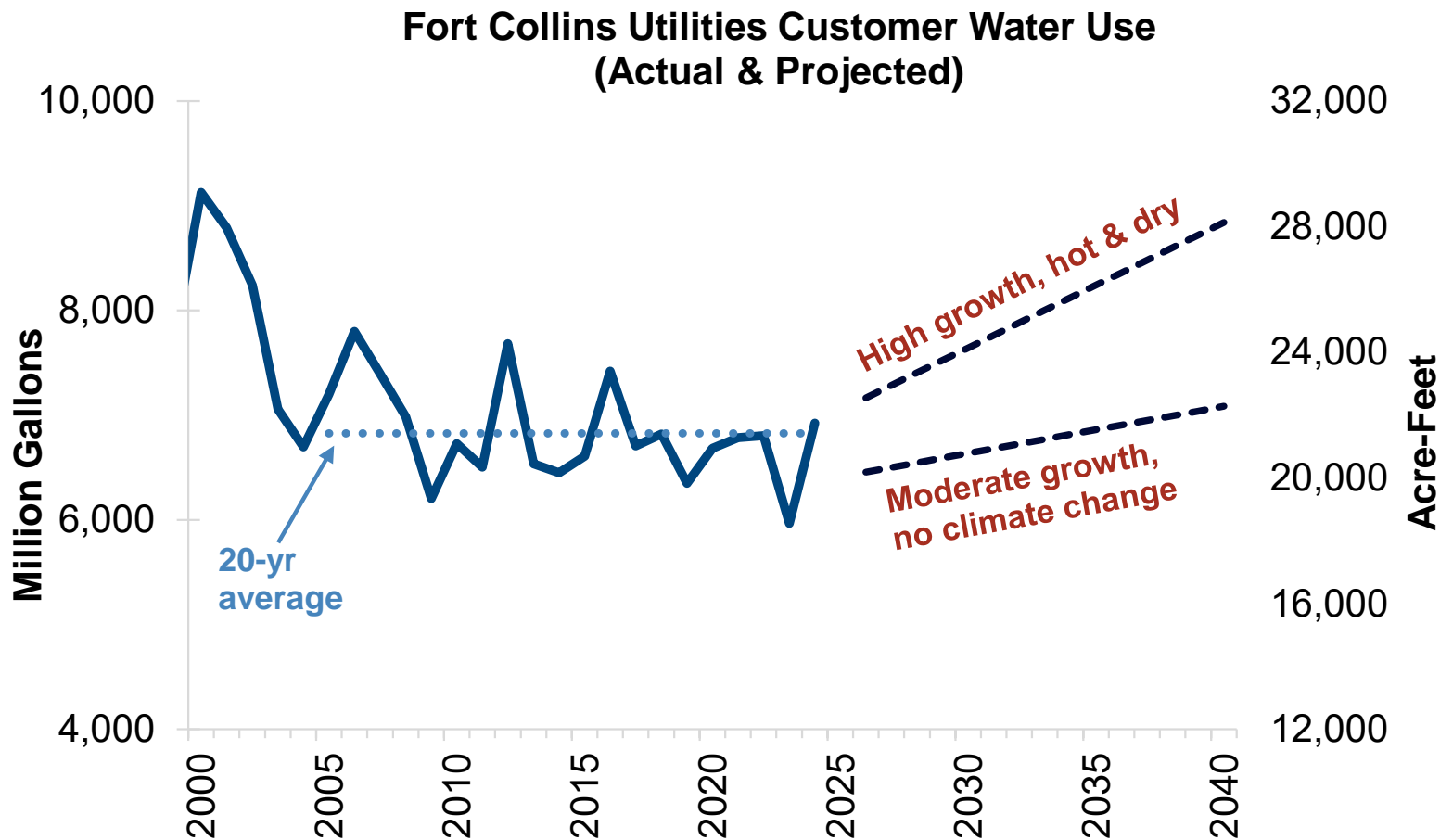
Utilities Water Profile

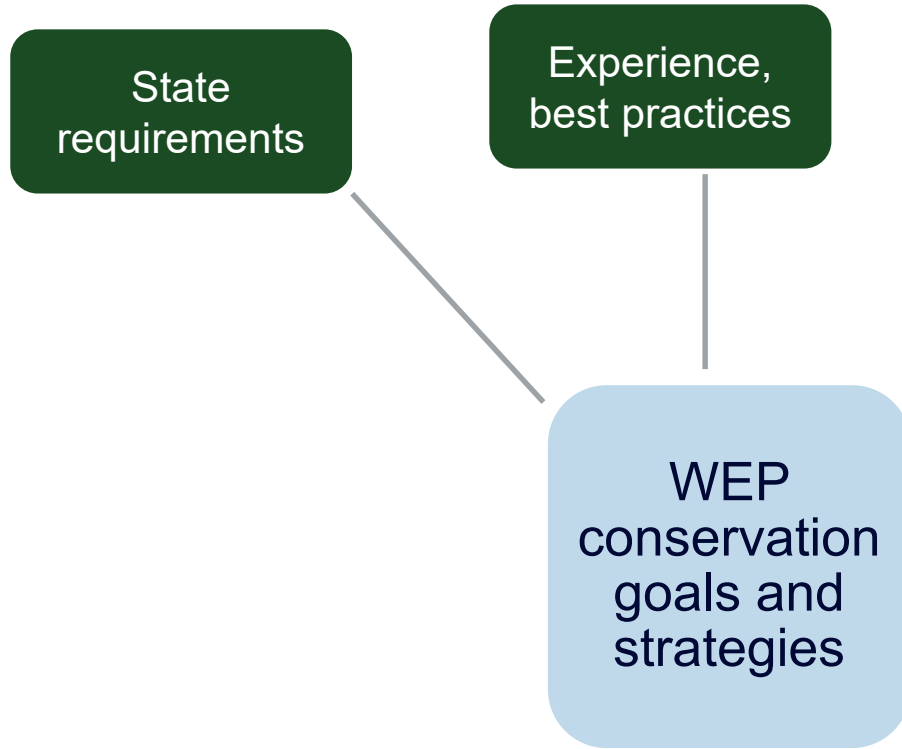
- 6,032,000,000 gallons (18,500 acre-feet) annual treated water use
- 60% indoor, 40% outdoor
- 60% residential, 40% commercial

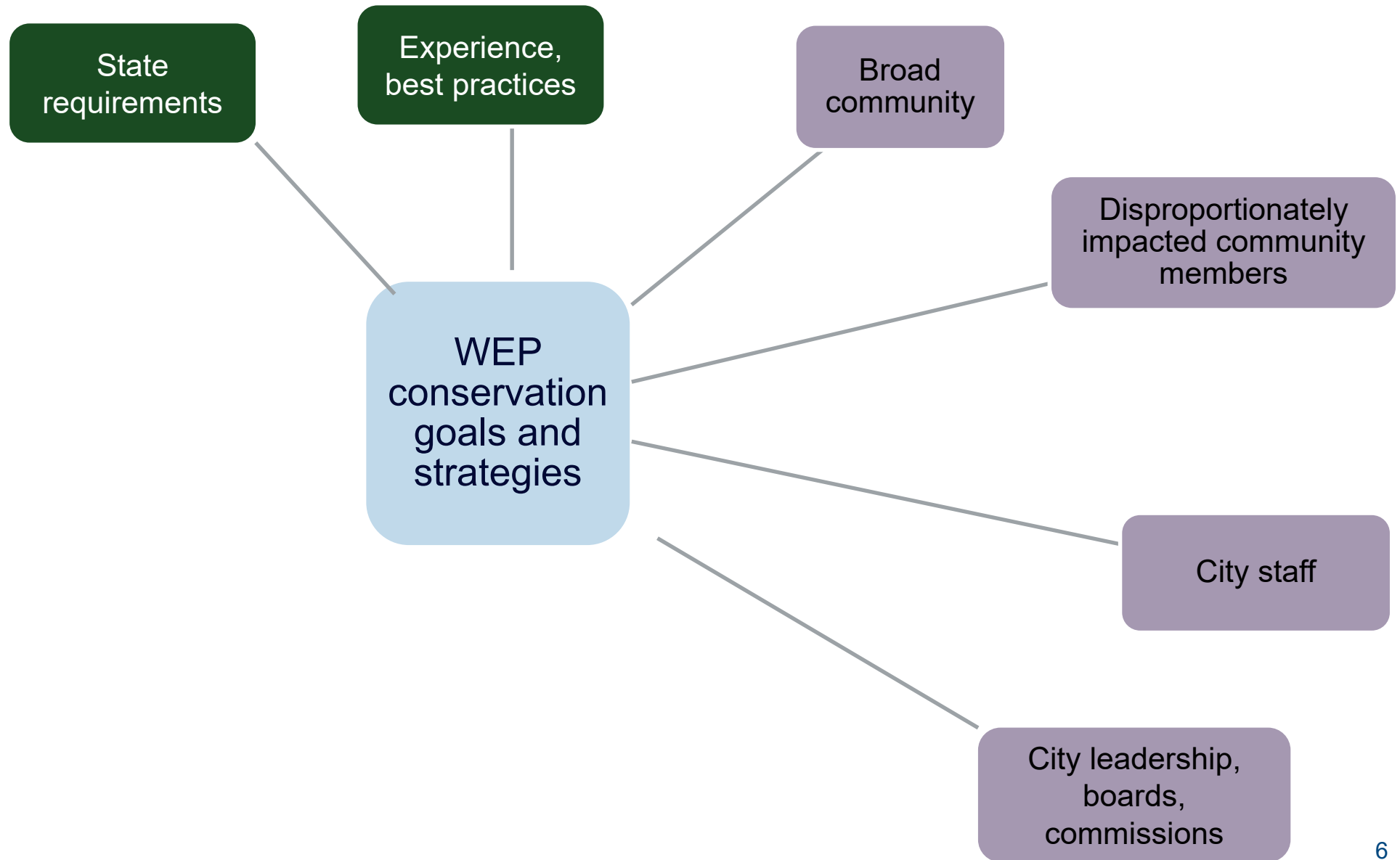
Why a WEP?

- Guide water use and conservation
- Set goals
 - 2015 goal: 130 GPCD by 2030
- Prioritize strategies: programs, incentives, policies
- Minimize risk of water shortage
- Meet state requirements

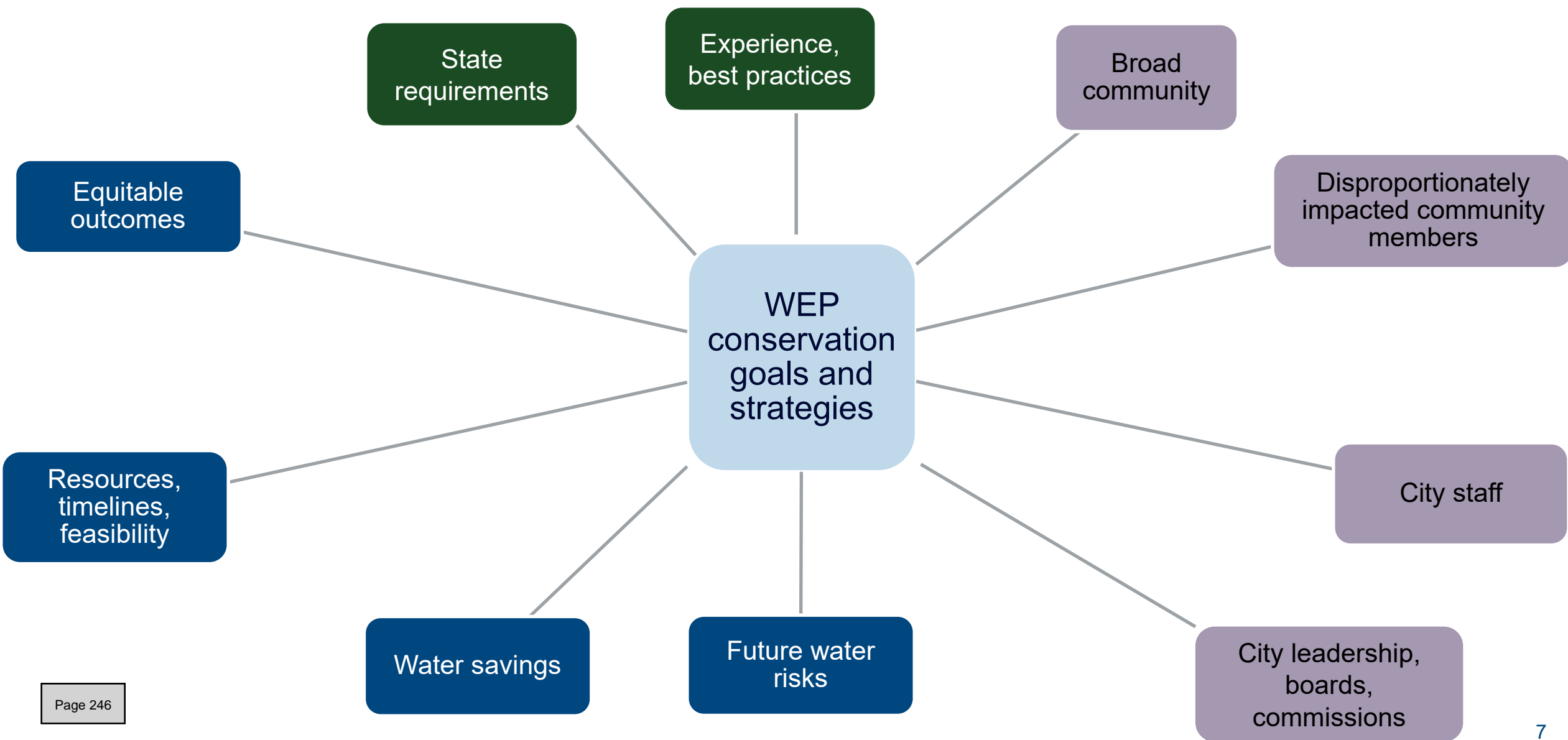
- Growth and climate drive potential for more water shortages
- Conservation:
 - Lowers annual demand by about 2% (135 MG or 415 AF)
 - Builds resilience, prepares community to act
 - Minimizes increases to utility and customer costs
- Storage, water rights portfolio, and land use planning also critical







Item 3. WEP Update Inputs



Engagement

- Disproportionately impacted community members
- Broad engagement
- City staff following One Water **collaborative** approach

Outcomes

- **5,000+** touchpoints
- Meetings, focus groups, community events, survey, OurCity, ads
 - Critical input from **Community Consultants**
- **40+ hours** connecting with staff

Equity

- Elevate needs and ideas
- Increase equitable outcomes from conservation strategies
- Build equity evaluation into annual reviews and plans

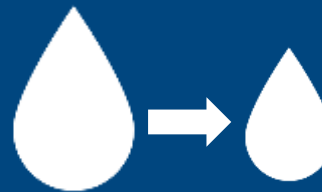


Concerns about water scarcity and providing for future generations

Willingness to take action

Want everyone to take responsibility

Desire for landscape change away from turf grass



Goal 1: All customers contribute to lowering annual water demand by 3% (*about 225 million gallons*) by 2040 to reduce risk of shortages



Goal 2: The City builds resilience by improving outdoor water efficiency across City-owned landscapes to benefit our community and environment

Goal 1: All customers contribute to lowering annual water demand by 3% by 2040



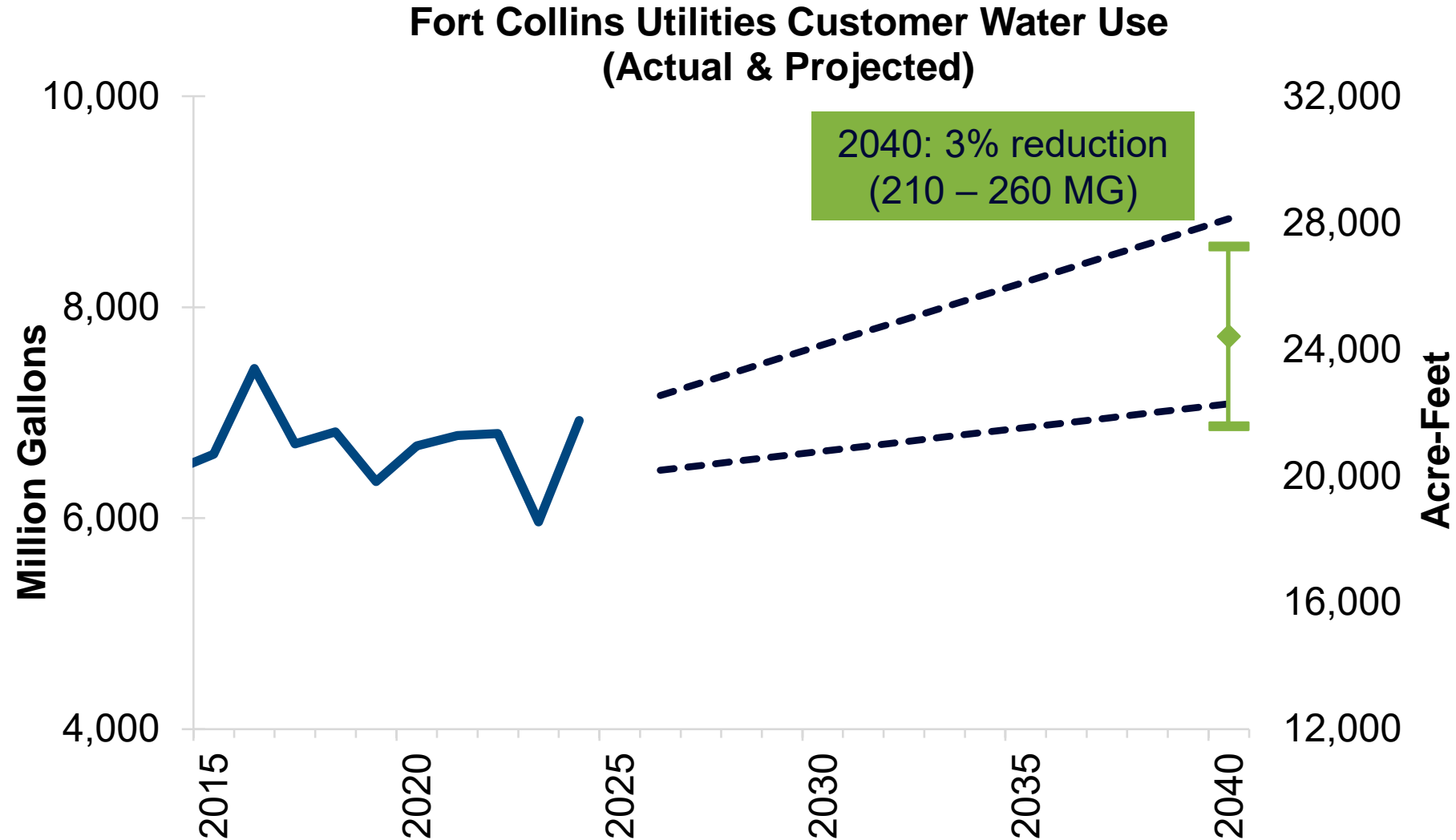
Objectives

- Offset demand increases due to rising temperature
- Reduce barriers, expand access to opportunities
- Do our part and lower municipal water use

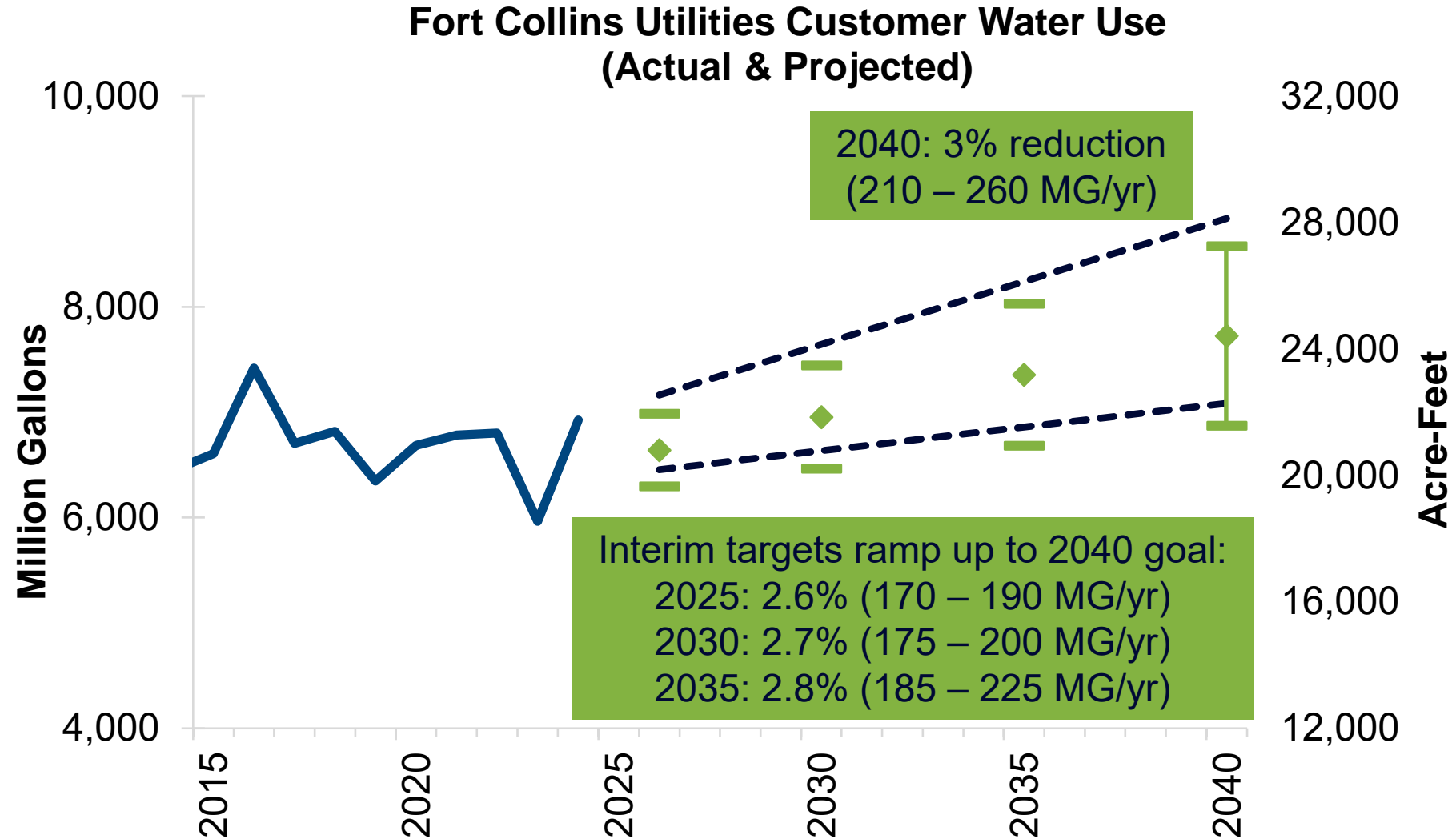
Metrics

- Water demand by customer sector
 - Include City accounts, losses
- Water Conservation program savings
- Program participation rates

Goal 1: All customers contribute to lowering annual water demand by 3% by 2040



Goal 1: All customers contribute to lowering annual water demand by 3% by 2040



Item 3. 2: The City builds resilience by improving outdoor water efficiency across City-owned landscapes



Objectives

- Update aging landscapes to modern efficiency and design
- Build resilience
- Consider all City landscapes, including raw water and other service areas
- Prioritize water use on multi-benefit landscapes like trees and sports fields

Metrics (City properties only)

- Number & area of irrigation upgrades
- Area of turf replaced with low-water landscape

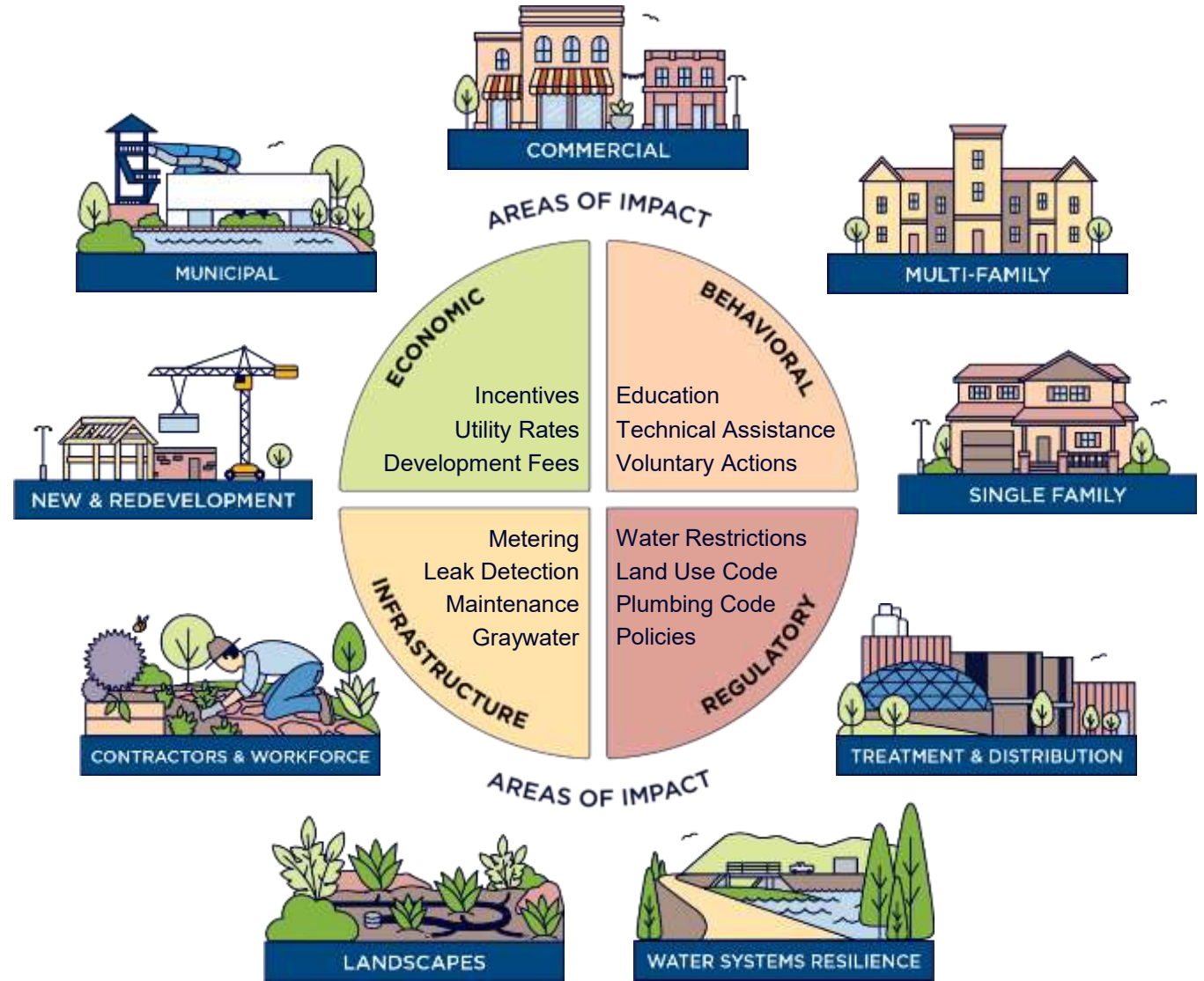
Strategies impact our whole community

- Provide opportunities for all
- Customize to meet customer sector needs
- Lead by example
- Continue doing what works well

Communications & marketing drive success

Strategies are areas of opportunity

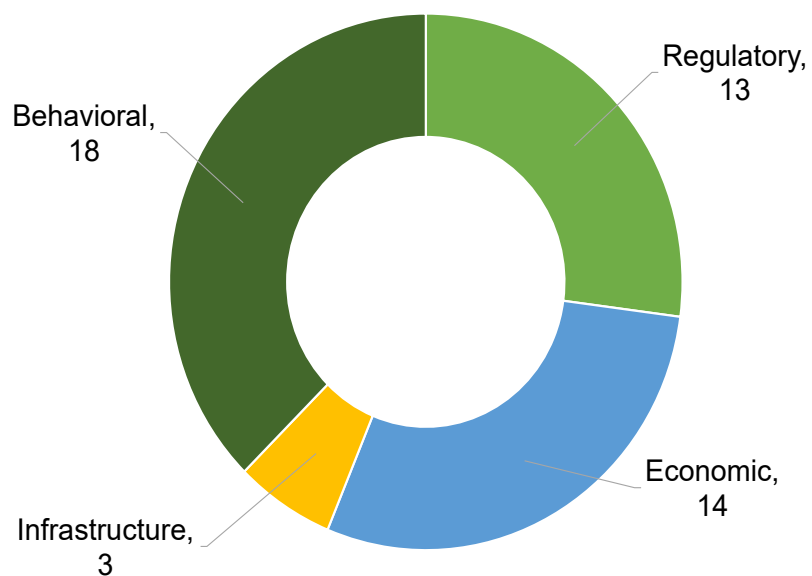
- Follow normal processes for approval post-WEP
- Track, report, and adjust over time to



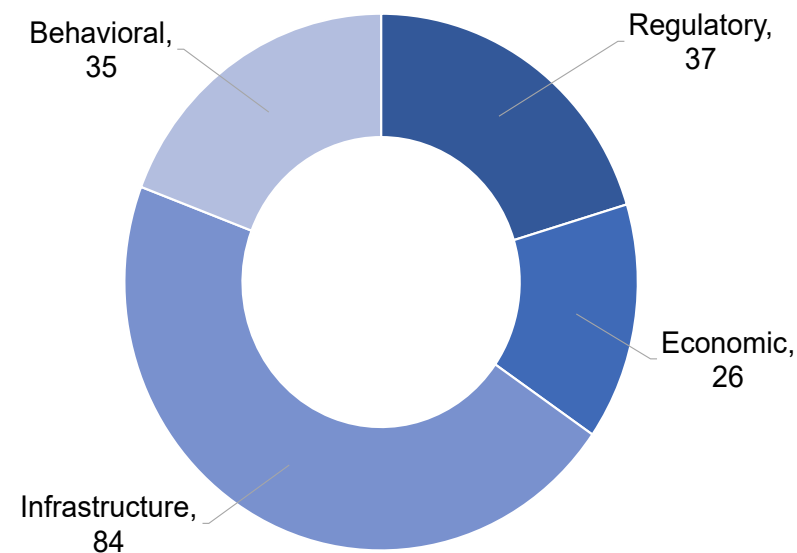
Item 3. Strategy Prioritization for WEP

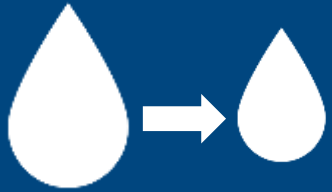
- Prioritized based on water savings, cost, feasibility, equitable outcomes, acceptance
- Engagement input:
 - Balance incentives and regulations
 - Minimize barriers
 - City already does a lot, community doesn't know

Count of Strategies by Approach



Estimated Water Savings by Approach





All customers contribute to lowering annual water demand by 3% by 2040

Customer Areas of Opportunity

- HOA & large turf transformation
- Rental incentives, education
- Plumbing repair assistance
- Grants
- Land use policies & developer incentives
- Daytime watering limits
- Commercial water use benchmarking

City Areas of Opportunity

- Retrofit City facilities with high-efficiency plumbing
- City facilities for pilots/examples
- Improve water loss tracking & increase line repair
- Consider equity in project prioritization



The City builds resilience by improving outdoor water efficiency across City-owned landscapes

Areas of Opportunity

- Irrigation upgrades and/or turf reduction
 - Landings Park
 - Nature in the City projects
 - Water Treatment Facility
 - City Hall
- Increase dedicated tree irrigation
- Align planning & communications across departments

Existing Best Practices

- Water use tracking
- Irrigation to ET need, audits, smart controllers
- Smart new design with xeriscape principles

Cost Impact Evaluation for 2025-2040

Goal 1
Lower annual water demand by 3% by 2040
\$1.5-1.75M/year

- Water Conservation’s ongoing budget (~\$1.5M)
- External grants
- Policy that impacts behavior
- BFO – two future enhancements

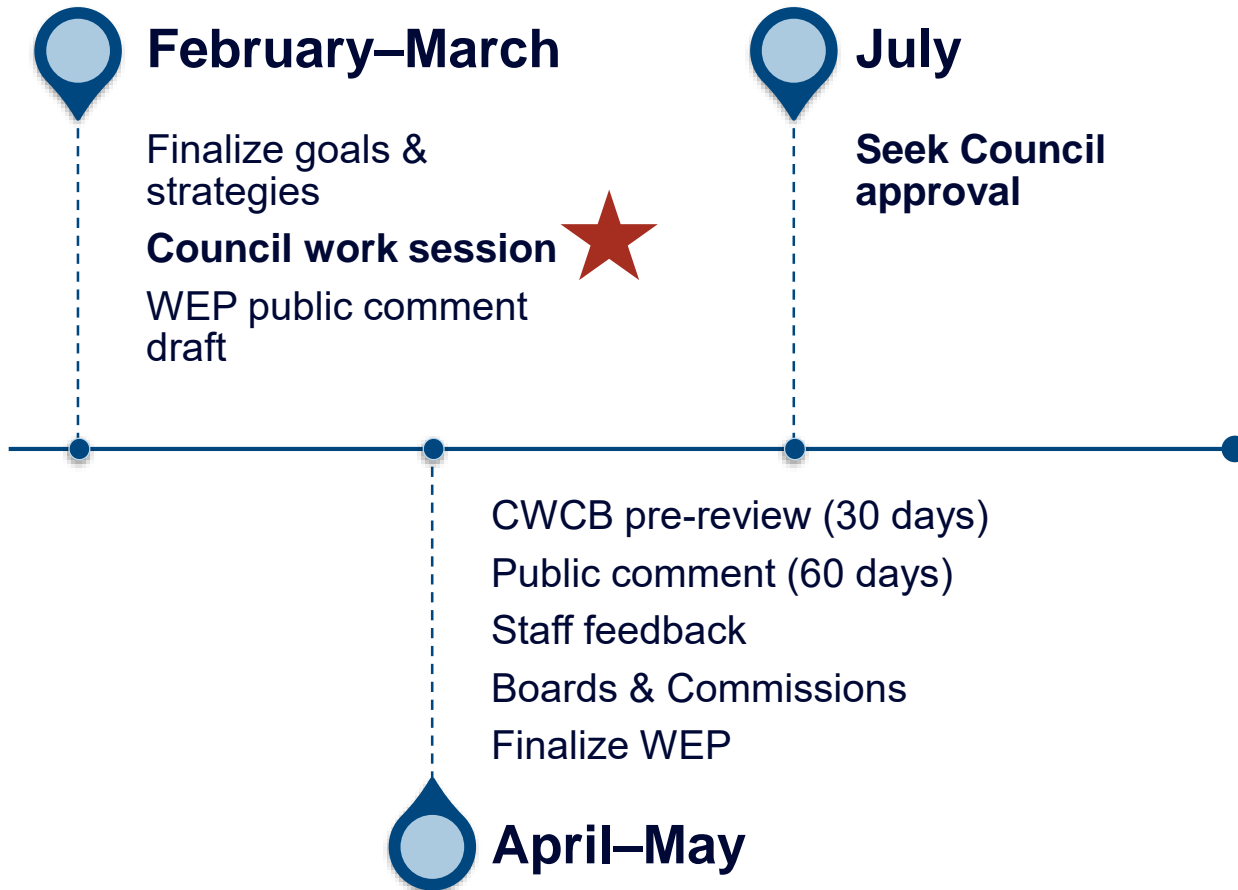
Goal 2
Build landscape resilience
\$50K/year

- Actions already occurring
- Grants (internal and external)
- Ongoing budgets
- 2050 Tax

Cost of Inaction

- **City** – Water purchases, regional competition, landscape damage, implementing restrictions
- **Customer** – Fees & rates, private landscape damage, responding to restrictions







1. Do the proposed conservation goals and strategies align with what you see as our community values?
2. Does the WEP work to-date meet “ambitious but comfortable” guidance?
3. What else does Council need to know prior to staff seeking approval of the updated WEP?

Thank you!

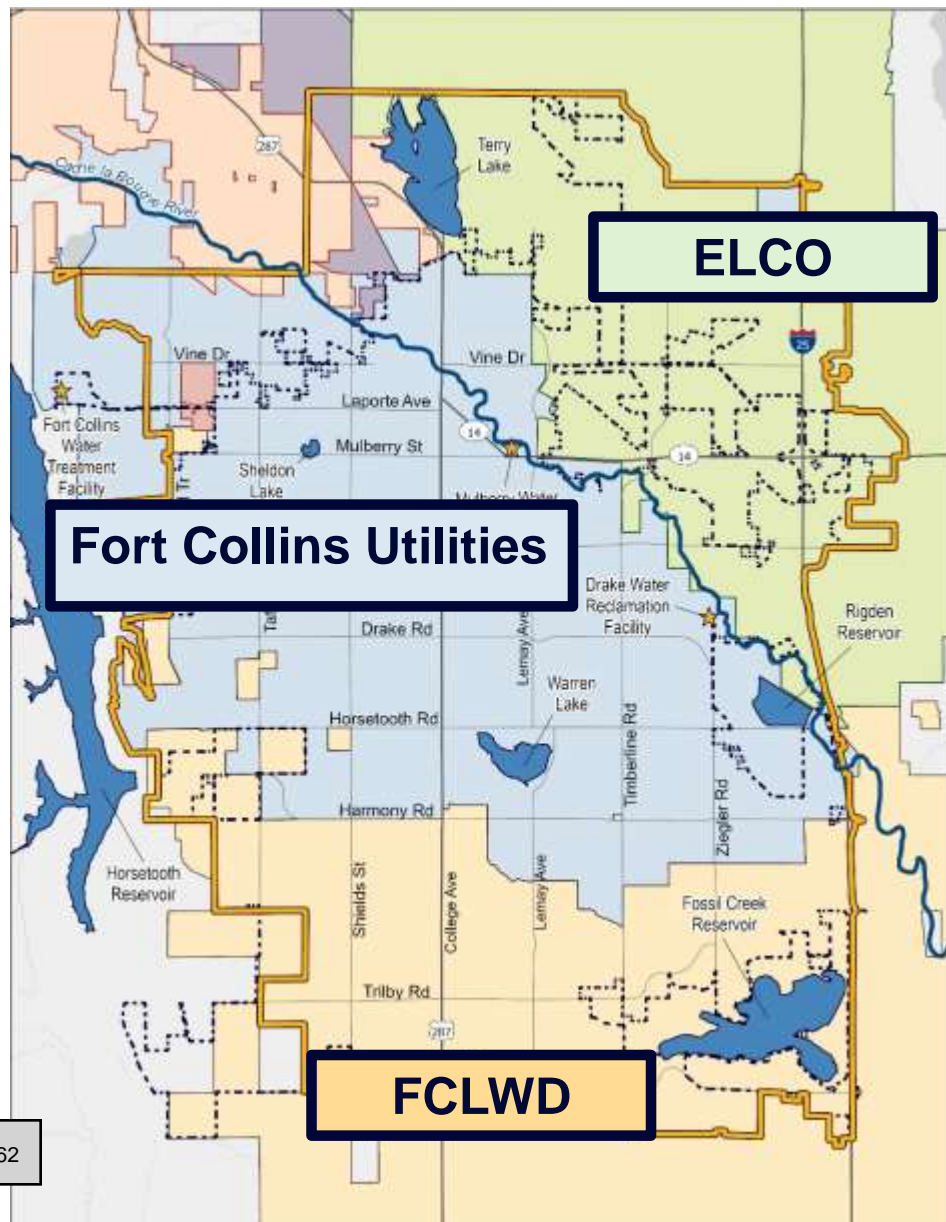


Item 3.



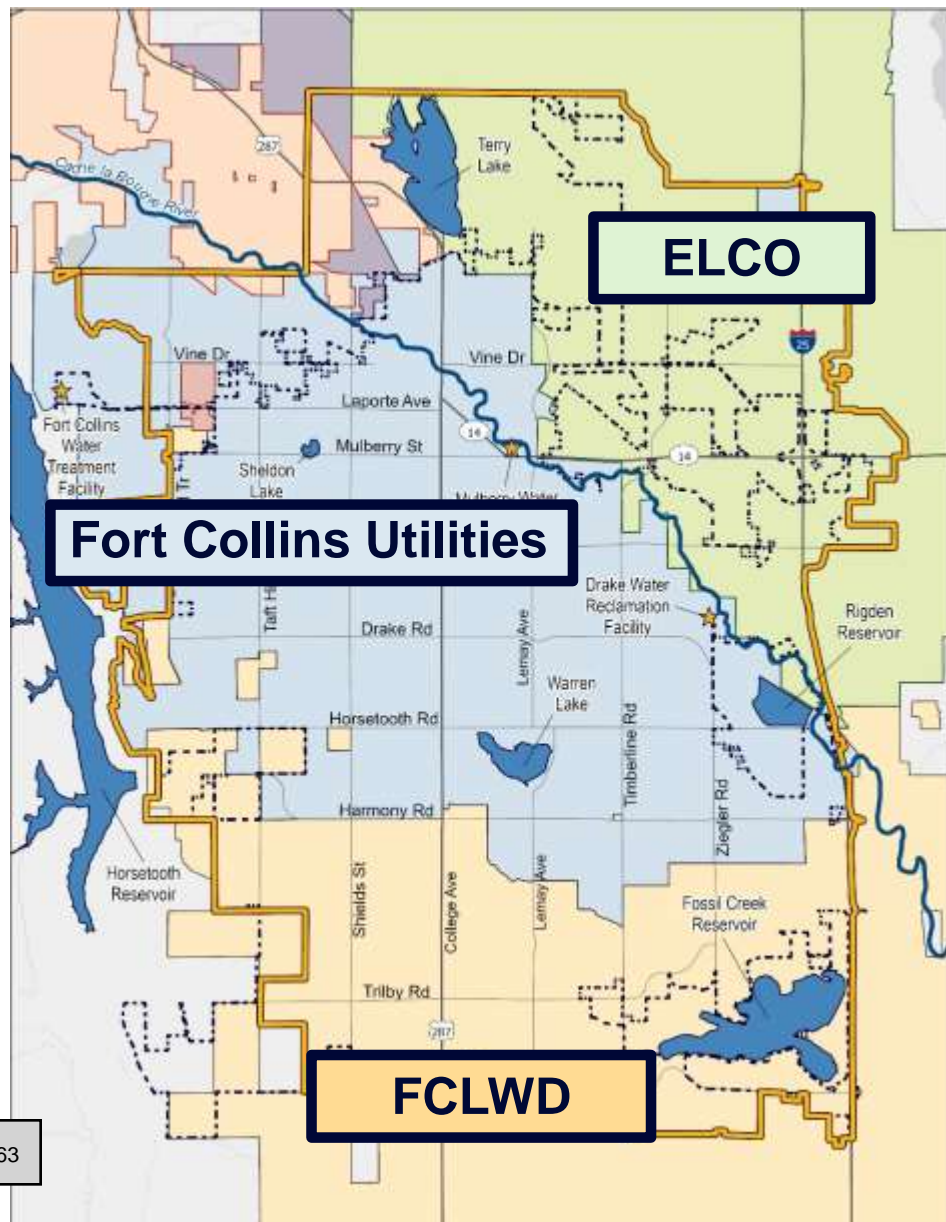
Extra Slides

Item 3. **Neighboring Water Providers: FCLWD's 2023 WEP**




- 2023 WEP goal: Lower water use by 9% over the 10-year planning period (with specific customer sector targets)
- Expect demand to increase by almost 50% by 2033 (from 10,089 AF to 15,064 AF) due to growth/development
 - Heavily dependent on CBT & NISP
 - About 60% outdoor use
- Conservation activities expected to save up to 1,229 AF/yr
 - 12 activities identified in WEP
 - Most similar to what we already do
 - New ideas: hydrant flushing truck, SFR conservation taps

Item 3. **Neighboring Water Providers: ELCO's 2024 WEP**



- 2024 WEP goal: Achieve water savings goal of 172 AF/yr in 2033 (relative to baseline projected demand)
- Population expected to triple by 2045, which will be ~ 60% buildout
- Heavily dependent on CBT
- 43% outdoor use
 - ~20% of residential customers can access raw water for irrigation
- Conservation activities targeting 172 AF/yr savings by 2033
 - 8 activities identified in WEP
 - Similar to what we already do

Conservation Strategy / Activity	FCLWD	ELCO	FC Utilities
1. Work more closely with planning	X	X	X
2. Garden In A Box	X		X
3. Residential sprinkler assessments	X	X	X
4. Smart irrigation controller rebates/discounts	X		X
5. Restrictions	X	X	X
6. Wasting water/leaks prohibition		X	X
7. Property Manager and HOA irrigation education/training	X		X
8. Hydrant Flushing Filter Truck	X		
9. Metering, Water Loss Control, Rates/Fees, Education, *Graywater, Information, Etc.	X	X	X
 indicates new activity			

Higher Priority



Lower Priority

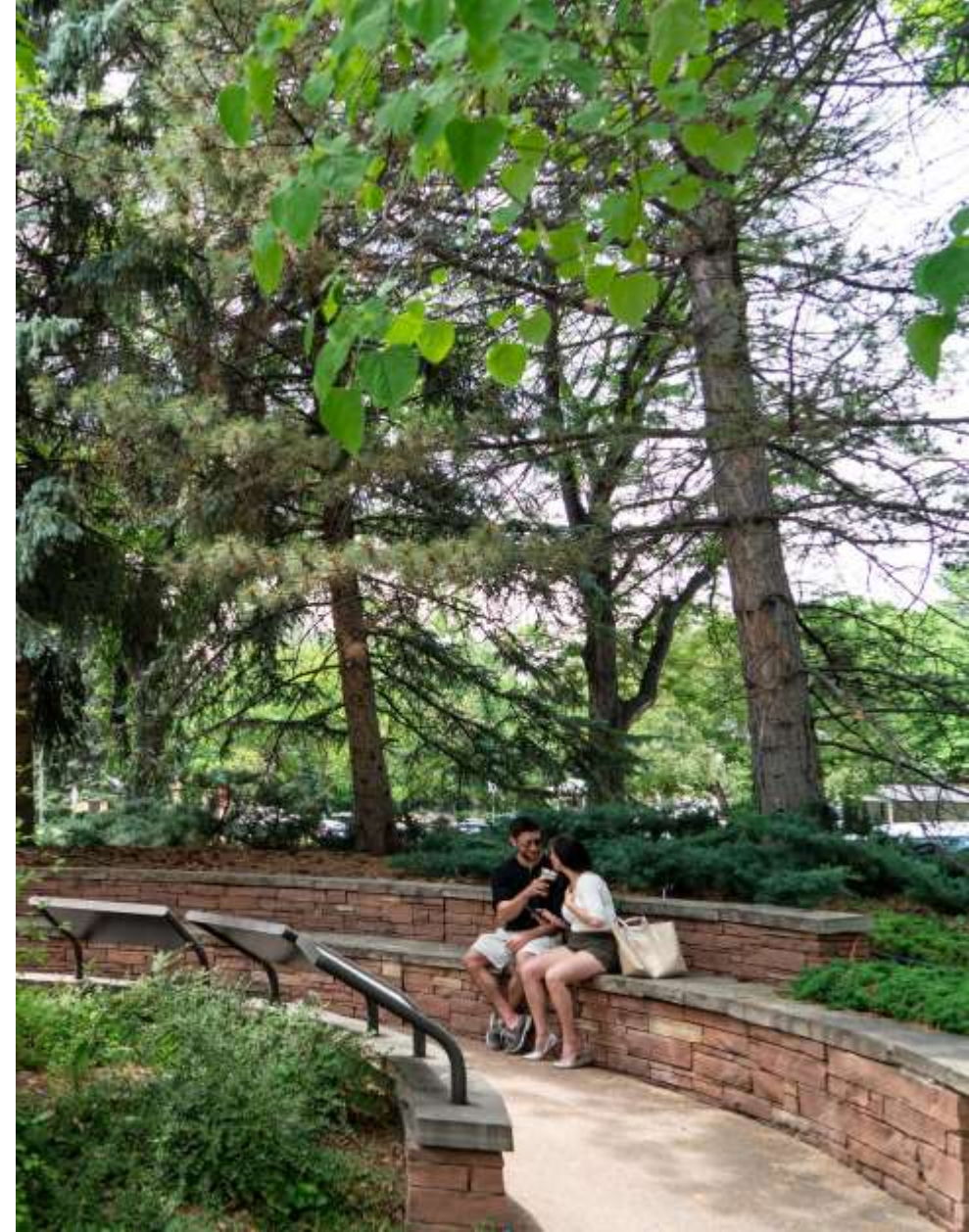
Priority Rank	Water Use Type	Votes
1	Indoor Home	99%
2	Health and Safety	94%
3	Indoor Business	77%
4	Other Landscaped Areas (Non-turf)	53%
5	Commercial/Public Recreation	40%
6	Turf Grass (Higher Water Use)	14%
7	Personal/Private Outdoor Recreation	9%

- Our *collective impact* should increase community resilience. Pursue conservation strategies that:
 - Impact our largest water users
 - Impact City operations; show how the City saves water
 - Everyone can participate in, even if only small water savings
 - Increase access and decrease burden
- There is support for a mix of incentives and regulations
 - Most people are willing to act
 - Conserving water is everyone's responsibility
 - Be thoughtful who you regulate, and who you incentivize
- Make water conservation engaging, accessible, and meaningful
 - Give people tools to understand their impact
 - Engage with people where and how they are comfortable
 - Offer flexible programs, processes

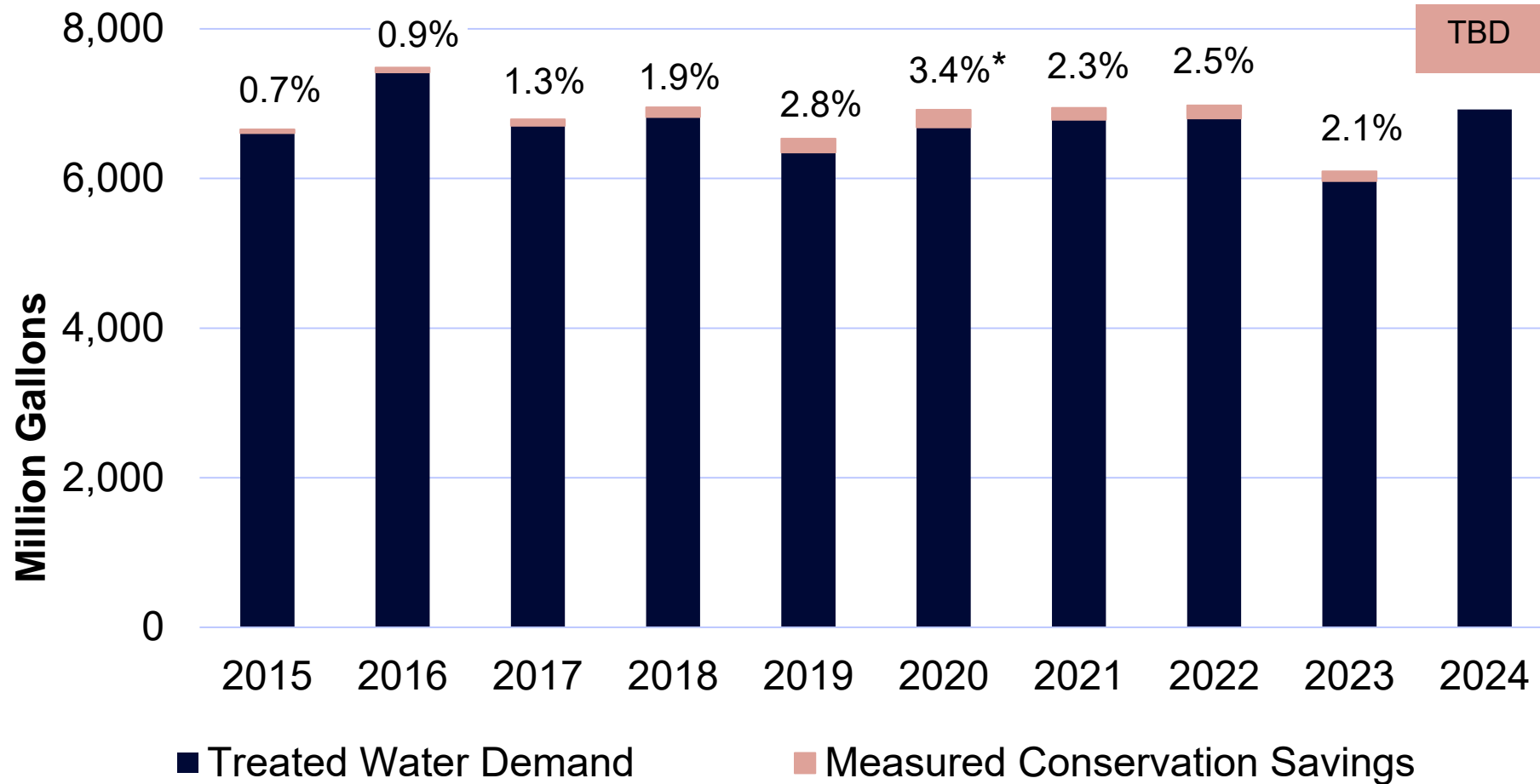


2025 Staff Engagement Takeaways

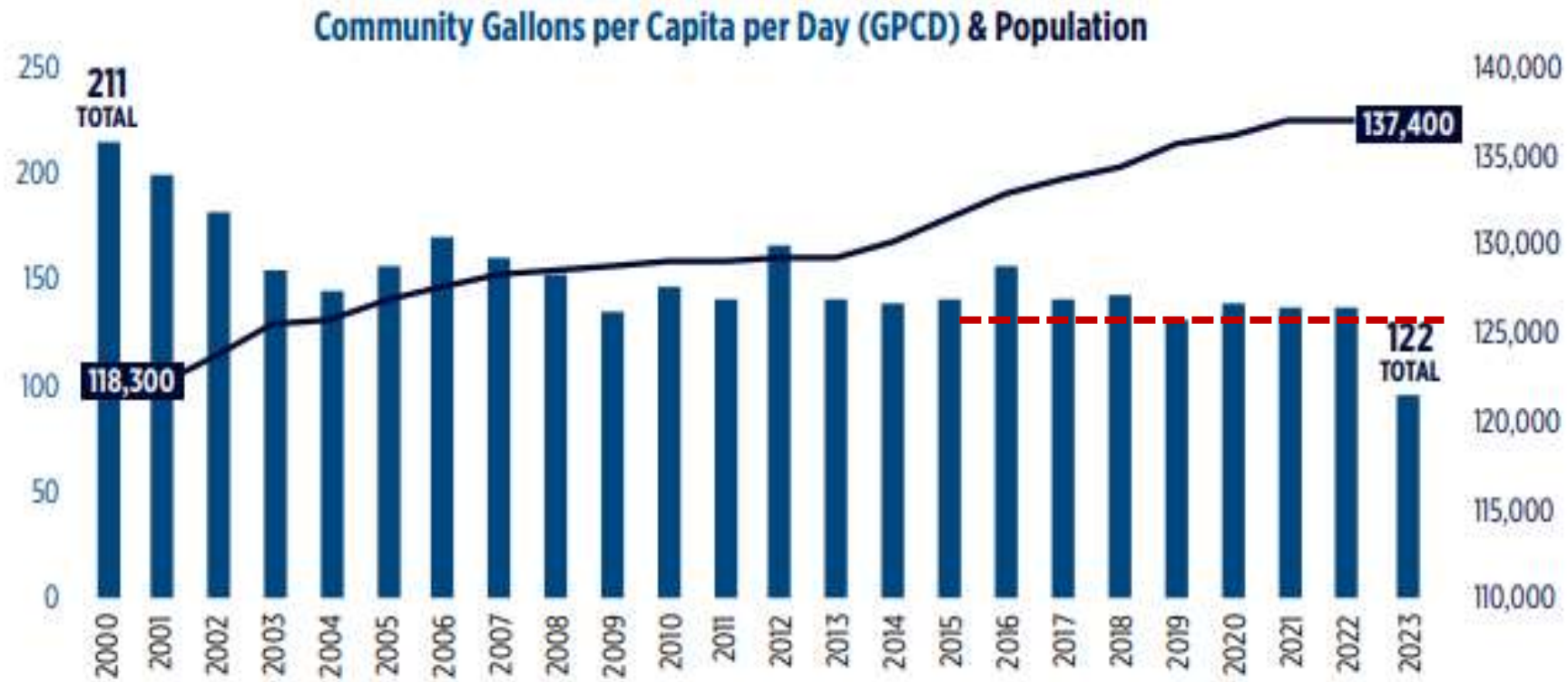
- Staff do a lot to use water wisely
- Many agreed on the importance of:
 - Water conservation for new builds
 - Xeriscaping
 - Indoor conservation opportunities
 - Raw water benefits
- Challenges
 - Public perception may not match City efforts
 - Public landscapes need to be safe, durable, attractive
 - Funding is needed to update older, water-hungry designs
 - More info wanted:
 - Public comments and appetite for xeric landscapes
 - Work/operations implications



Water Conservation Annual Savings



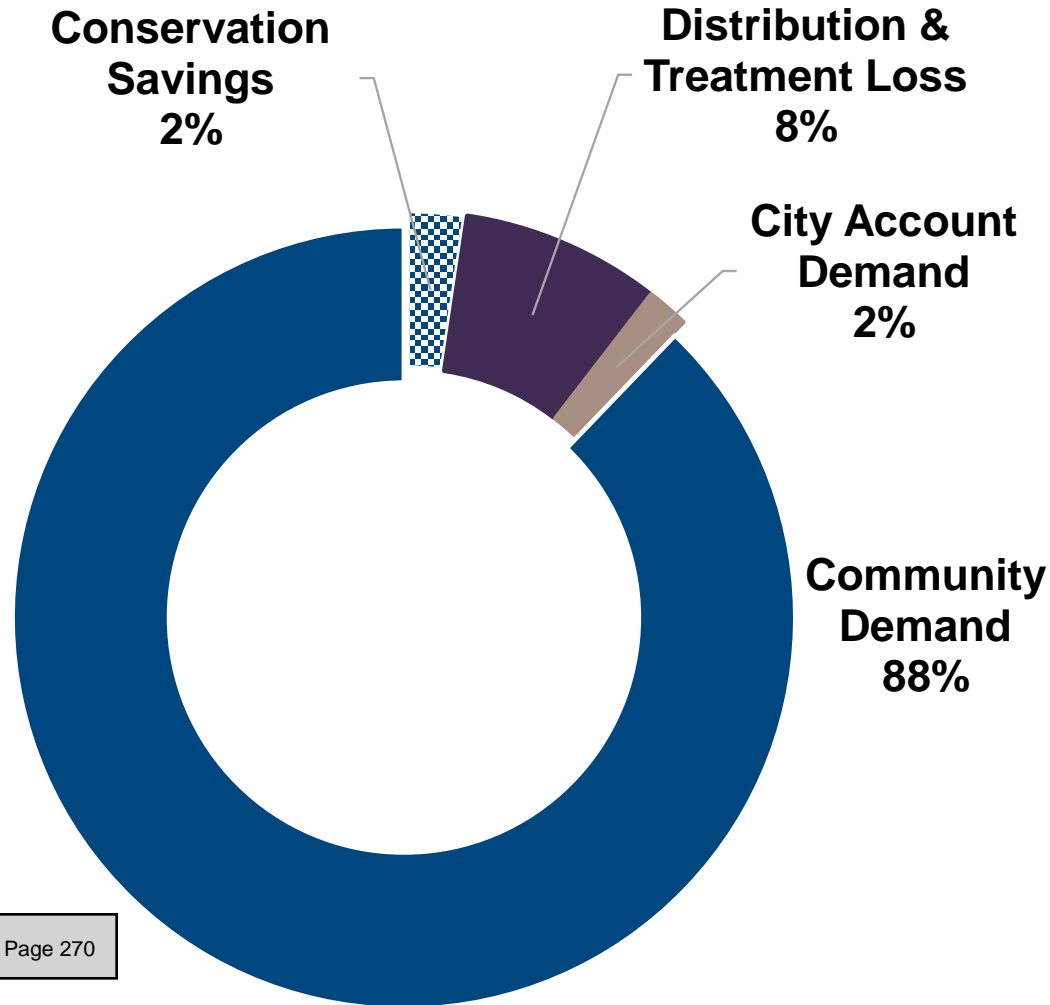
* Page 268 included 30 days of mandatory restrictions due to infrastructure project & wildfire; conservation program savings were estimated to be 1.9% without mandatory restrictions.



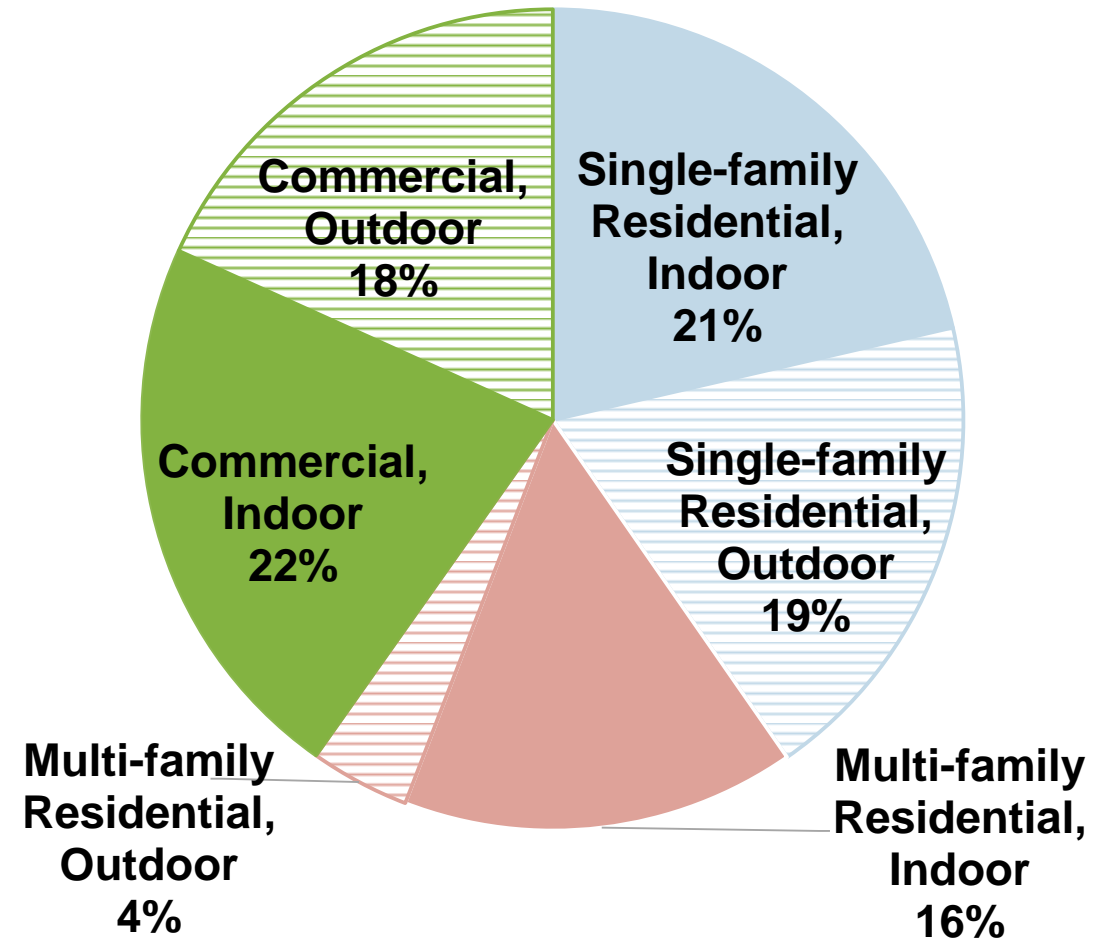
Current WEP goal: 130 GPCD by 2030

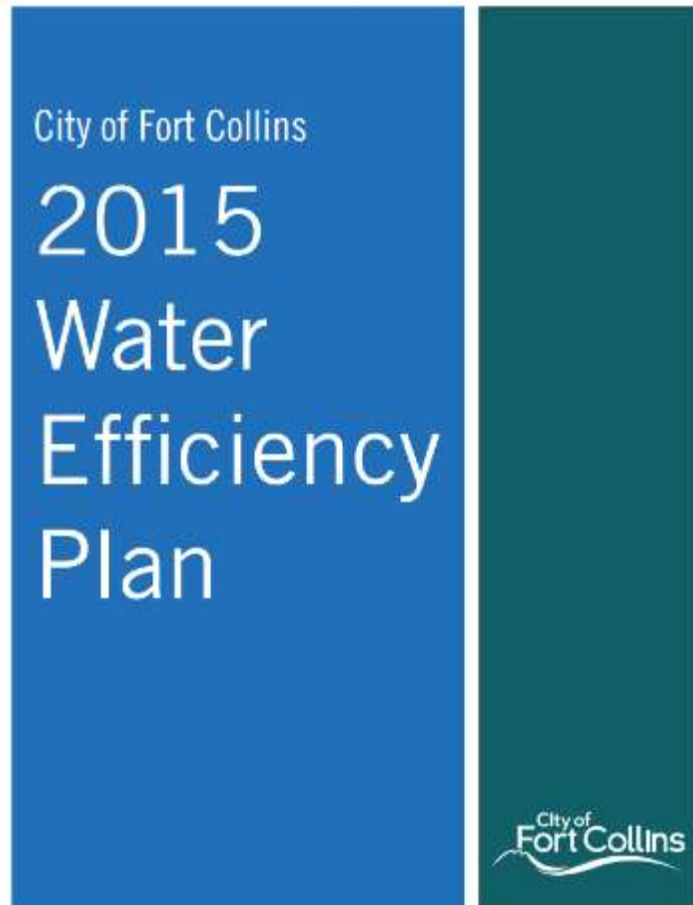
- 42% decrease in GPCD since 2000
- Met the goal in 2023 with help from record precipitation

Average Annual Demand Including Savings and Non-Revenue Losses (2019 – 2024 average)



Annual Residential and Commercial Customer Demand (2022)





fcgov.com/WEP

Current WEP goal: 130 gallons per capita per day by 2030

Areas of Opportunity

1. Leverage Advanced Meter Fort Collins data and capabilities
2. Promote and support greater outdoor water efficiency
3. Encourage greater integration of water efficiency into land use planning and building codes
4. Expand commercial and industrial sector strategies
5. Increase community water literacy

File Attachments for Item:

4. Southeast Community Center (SECC)

The purpose of this item is to present four different options for budget and scope for the Southeast Community Center (SECC).

February 25, 2025

WORK SESSION AGENDA ITEM SUMMARY

City Council



STAFF

Dean Klingner, Director, Community Services
 LeAnn Williams, Director, Recreation
 Victoria Shaw, Finance Senior Manager, Community Services

SUBJECT FOR DISCUSSION

Southeast Community Center (SECC)

EXECUTIVE SUMMARY

The purpose of this item is to present four different options for budget and scope for the Southeast Community Center (SECC).

GENERAL DIRECTION SOUGHT AND SPECIFIC QUESTIONS TO BE ANSWERED

1. What feedback do Councilmembers have on the proposed staff recommendation for scope and funding of the Southeast Community Center?

BACKGROUND / DISCUSSION

The Southeast Community Center project includes over 11 years of project development from the completion of a 2013 Feasibility study through today. Due to the volume of background information, this Agenda Item Summary presents the background in summary, not complete detail.

- In October of 2013, the City completed the "Fort Collins Southeast Community Recreation & Arts Center – Summary of Needs and Development Plan." This study provides valuable information about the origination of the idea of a facility in SE Fort Collins, but is now old enough that it does not reflect current community needs.
- In April of 2015, the Community Capital Improvement Program (CCIP) ¼-cent sales tax passed and included an item for a "Southeast Community Center and Outdoor Pool." The more detailed language read: "The Southeast Community Center with Outdoor Pool will build a Community Center in southeast Fort Collins focused on innovation, technology, art, recreation, and the creative process. The Center will also have a large outdoor leisure pool with water slides, sprays, jets, decks, a lazy river and open swimming area."
- In January of 2021, Council adopted "ReCreate, Parks and Recreation Master Plan." This document is the "north star" for guiding parks and recreation policy and investment and highlights the need and plan for a Southeast Community Center at a high level.

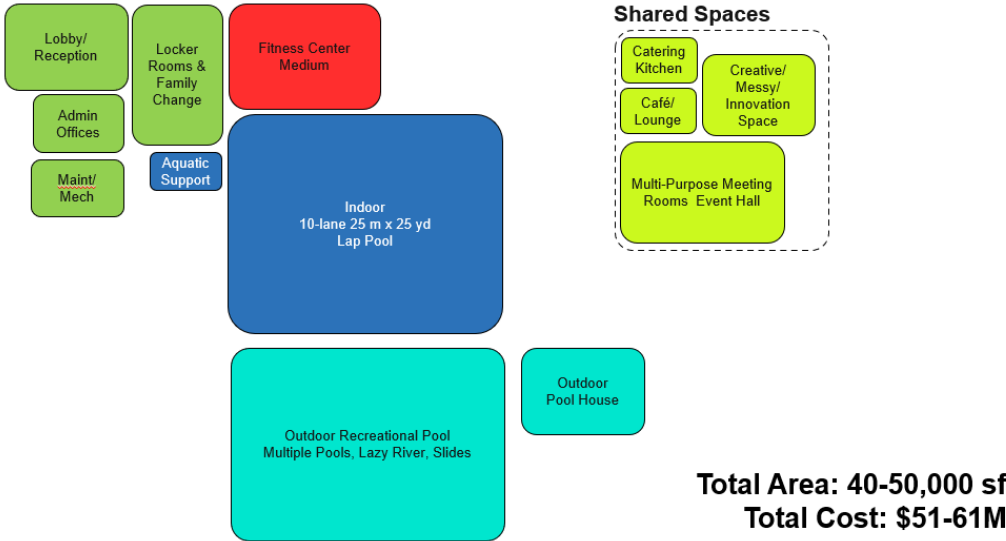
Item 4.

- In 2022, at Council’s request, the City completed a more detailed aquatics study to understand the demand, options and opportunities for public aquatics facilities in Fort Collins.
- In 2022, Council held two work sessions and a Council Finance Committee discussing this project. No decisions were made, and as a result of these meetings, City staff continued to work with the Poudre River Public Library District (PRPLD or "the Library") and Poudre School District (PSD) as potential partners and began to consider a larger facility than required in the ballot language that could be phased or funded through a future funding source.
- In November of 2023, the 2050 1/2-cent sales tax passed with the following ballot language: “50% for the replacement, upgrade, maintenance and accessibility of parks facilities and for the replacement and construction of indoor and outdoor recreation and pool facilities.”
- The 2023-24, City Budget included funds for project development and design. City staff have been actively working on this phase of the project since the 1st quarter of 2024. Progress to date has included hiring of an Owners Representative, a Design Firm / Architect, and a General Contractor and development of multiple scope and budget options.
- Staff presented four facility scope and budget options at Council Finance on February 6, 2025. Also presented, was a “funding stack” that used multiple funding sources to finance the options presented. The Council Finance Committee recommended that staff bring forward option 2b to the full Council at this work session as the recommended project. This was in alignment with staff’s recommended scope and budget that both met the intent of the 2015 CCIP ballot project, fulfilled the partnership commitment with both Poudre Libraries and PSD, could be funded with the identified funds, meets the Community Center level of service defined in the ReCreate Master Plan, and is comparable to the size and amenities in Fort Collins’ two other Community Centers. It also meets the gap of a community center in SE Fort Collins.

FACILITY OPTIONS

Option 1 – Not Recommended

Estimated Cost Recovery: 34 – 42%
Estimated Annual General Fund Subsidy: \$1.3 – 1.5M

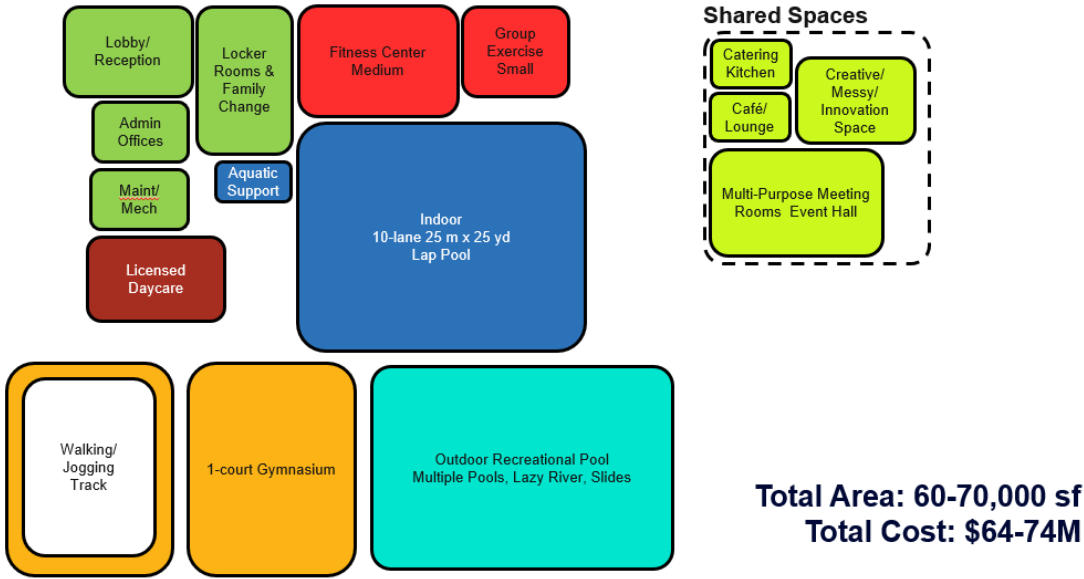


Item 4.

Staff believe this facility does not meet the intent of the 2015 CCIP ballot measure that called for a Community Center with outdoor pool. It also does not fill a gap of recreation spaces in SE Fort Collins. This facility also has the highest cost of ownership over a 30-year period due to its lack of recreation spaces to generate revenue.

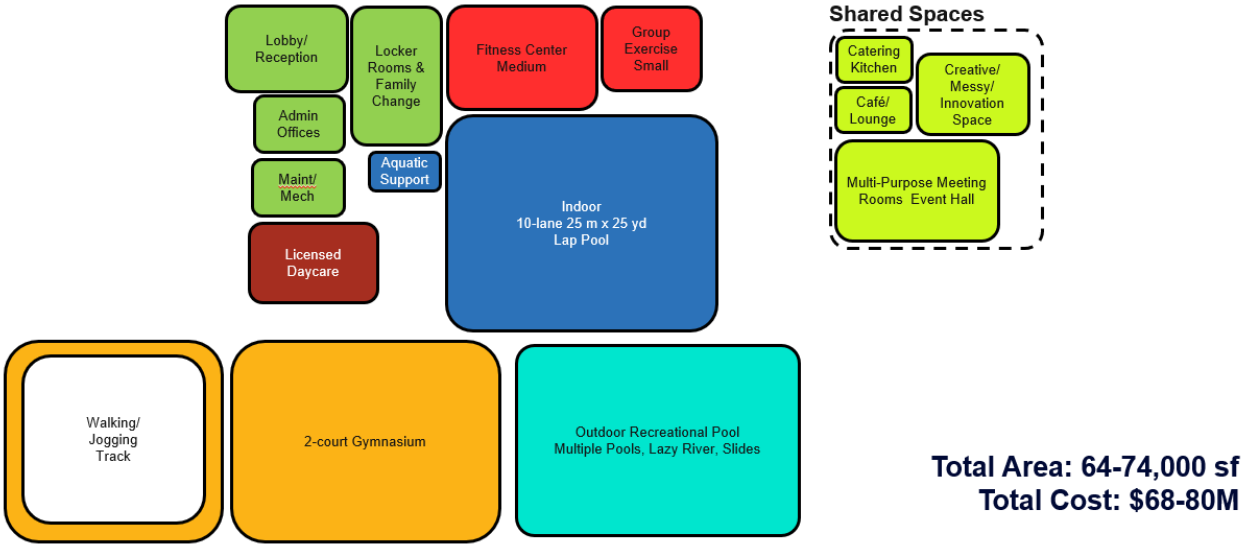
Option 2a – Not Recommended

Estimated Cost Recovery: 61 – 76%
Estimated Annual General Fund Subsidy: \$600,000 - \$900,000



Option 2b – Recommended

Estimated Cost Recovery: 66 – 82%
Estimated Annual General Fund Subsidy: \$450,000 – \$850,000

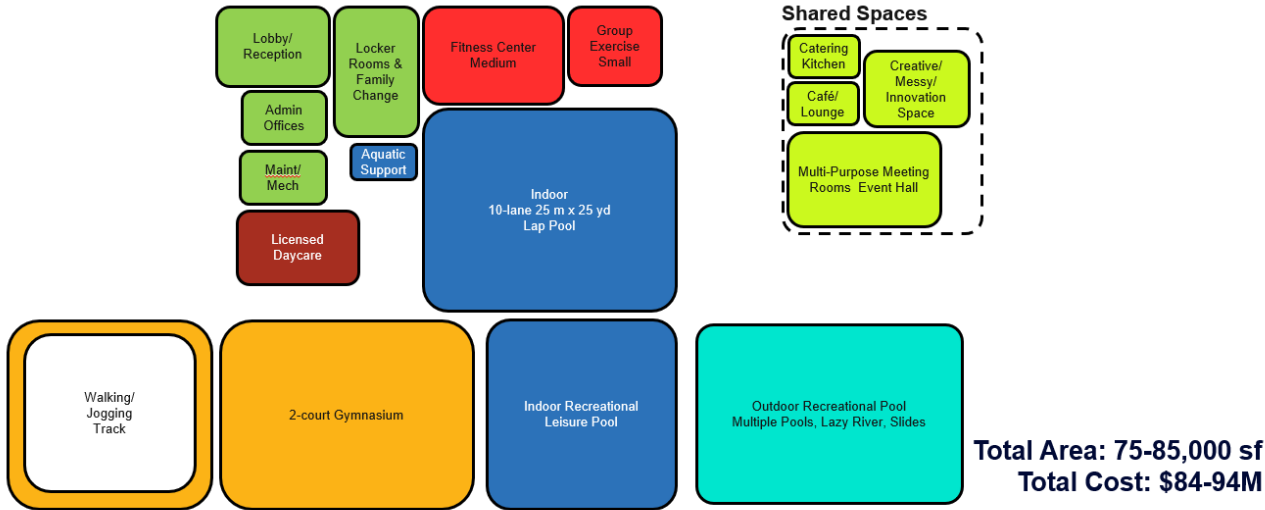


Item 4.

Option 2b is both staff and Council Finance Committee’s recommendation. This facility meets the intent of the 2015 CCIP ballot of a Community Center with Outdoor Pool. It is in alignment with the level of service identified in the ReCreate Master Plan and is comparable to Fort Collin’s two current Community Centers. This facility has the lowest cost of ownership over a 30-year period due to its strong ability to generate revenue from the multiple recreation options within the facility.

Option 3 – Not Recommended

Estimated Cost Recovery: 59 – 74%
Estimated Annual General Fund Subsidy: \$875,000 – \$1.4M



This facility meets the intent of the 2015 CCIP ballot of a Community Center with Outdoor Pool and meets the identified gap of an indoor leisure pool in Fort Collins. It is in alignment with the level of service identified in the ReCreate Master Plan and brings indoor leisure aquatics to Fort Collins which would be highly utilized and appreciated by the community. Staff is hesitant to recommend this facility based upon previous Council member feedback of not putting “three pools” at the Southeast Community Center and the potential for future tradeoffs in the 2050 tax to fully fund the construction of this facility.

Funding “Stacks”

The design and construction of the SECC will come from a few different sources.

- Community Capital Improvement Program 2015 (CCIP) - \$18 Million
- CCIP Reserves - \$12-12.5 Million
- 2050 Tax - \$42-50 Million
- DOLA Grant - \$2 Million
- Recreation Reserves - \$1-3 Million

Potential Funding Scenarios (\$ in Millions)

Bond against 2050 Tax Proceeds	\$27	\$34	\$40
2050 Tax Reserves	\$10	\$10	\$10
CCIP Appropriated	\$18	\$18	\$18
CCIP Reserves	\$12	\$12	\$12
DOLA Grant	\$2	\$2	\$2
Recreation Reserves	\$1	\$2	\$3
Total City Funding for SECC	\$70	\$77.5	\$85
<i>% of 2050 Parks & Recreation Share</i>	<i>13%</i>	<i>16%</i>	<i>18%</i>

Assumptions

Bond Years	20	20	20
Bond Rate	5.0%	5.0%	5.0%
Net Taxable Growth Rate	2.5%	2.5%	2.5%

NEXT STEPS

Staff will be taking the budget and scope to the community on different options within the shared spaces and program opportunities in recreation spaces.

Staff will be speaking directly with the Parks & Recreation Advisory Board, Youth Advisory Board and Senior Advisory Board.

Staff will bring back a project update and appropriation request in the 2nd or 3rd quarter of 2025.

ATTACHMENTS

1. Presentation



SOUTHEAST COMMUNITY CENTER

Recreation | Aquatics | Library | Innovation



Southeast Community Center Update

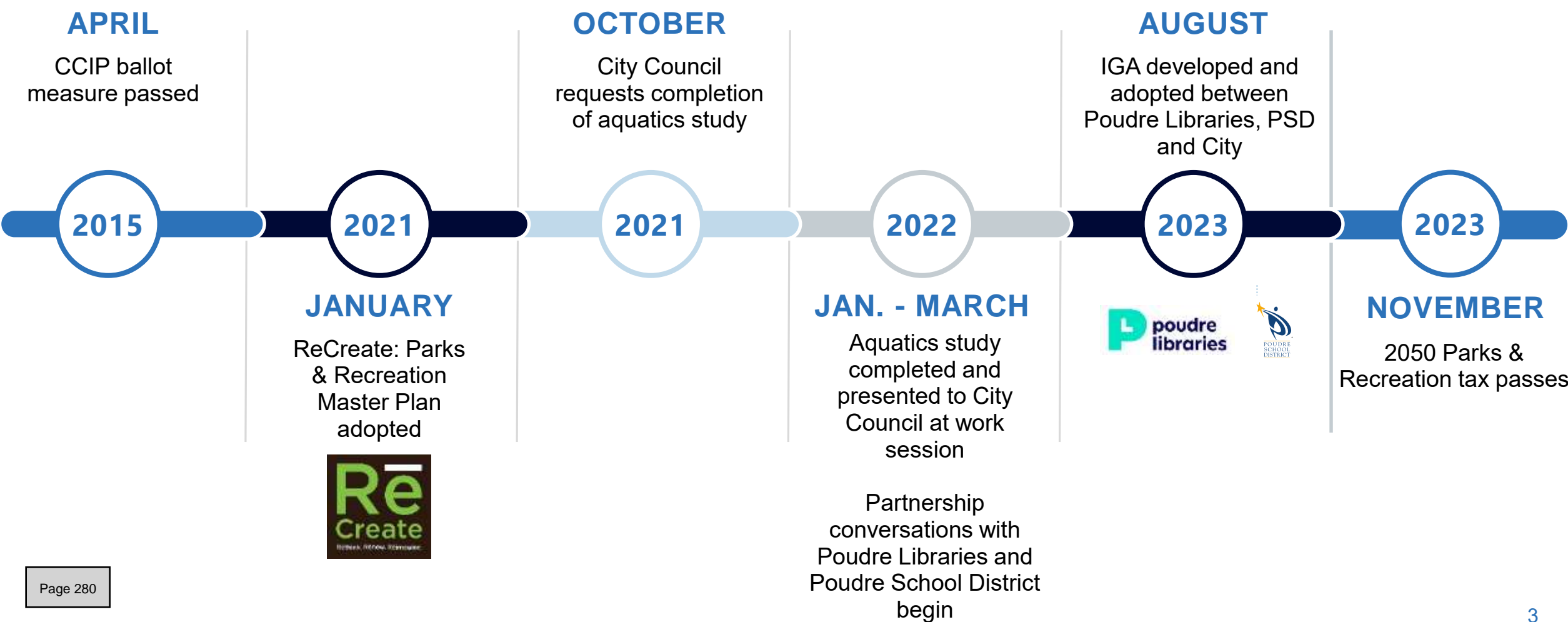
Dean Klingner
Director, Community Services

LeAnn Williams
Director, Recreation

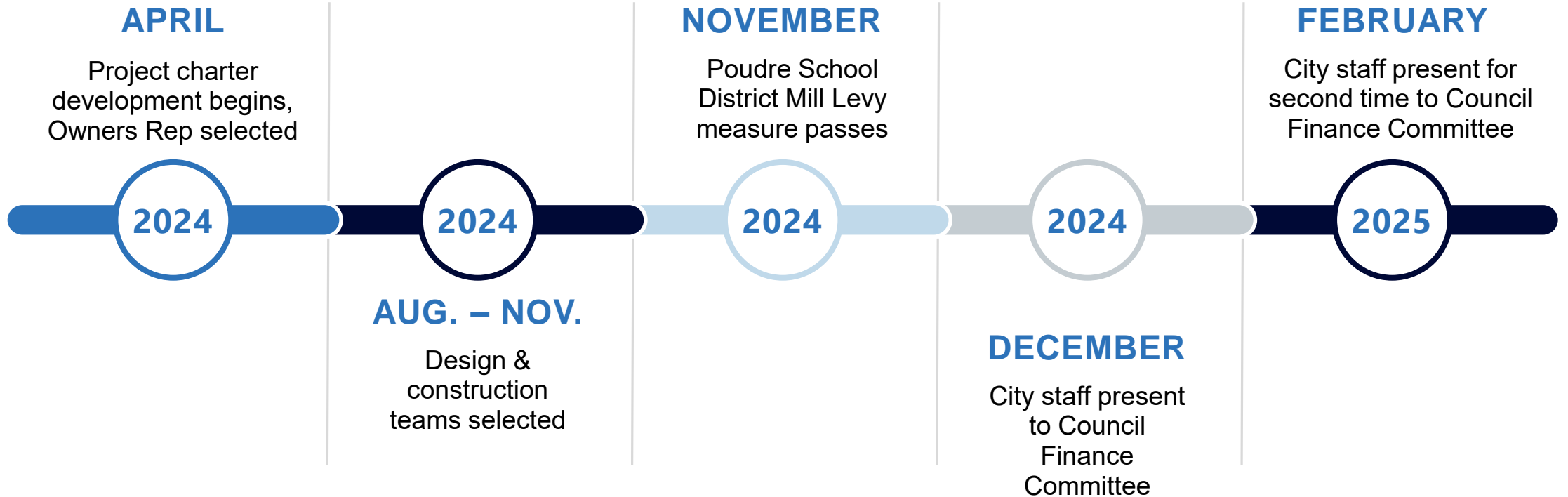
What feedback do Councilmembers have on the proposed staff recommendation for scope and funding of the Southeast Community Center?



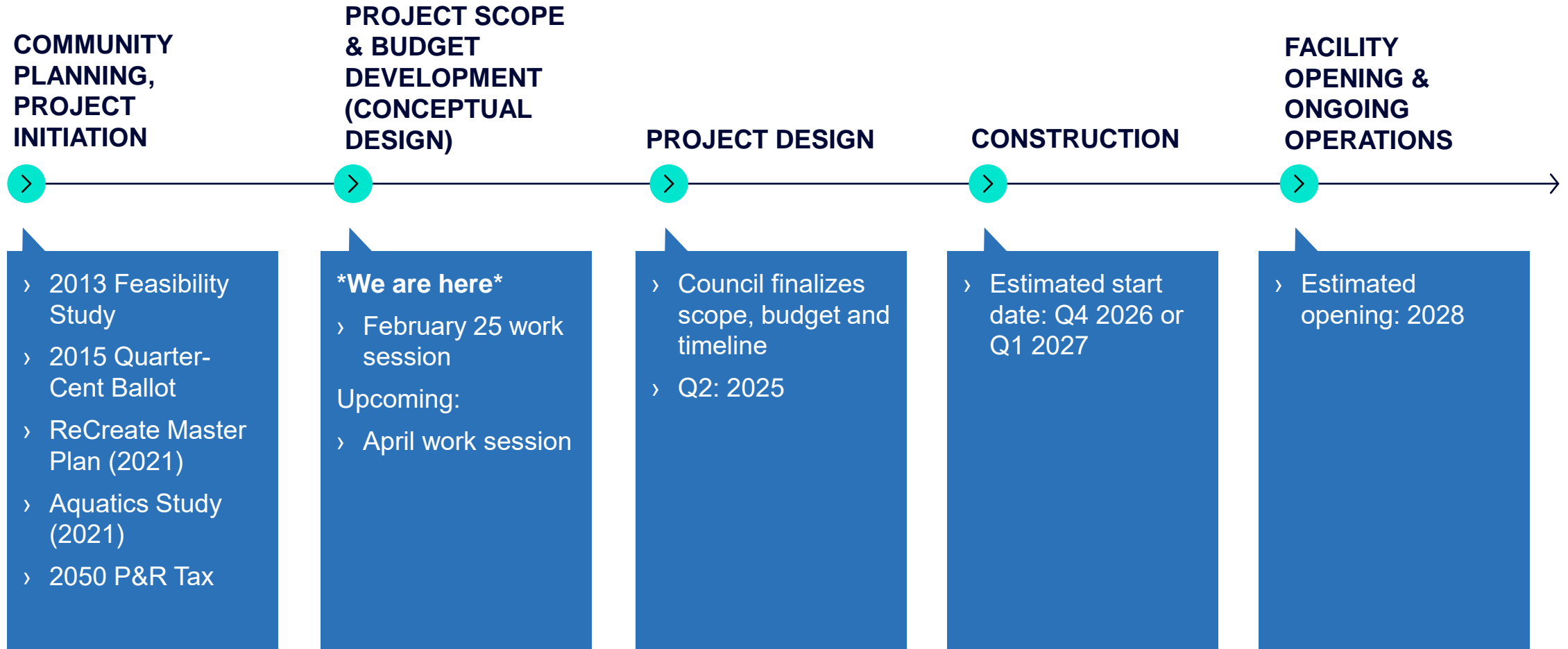
2015 – 2023



2024 – 2025



Process



**COST
CONSIDERATIONS**

- Total Capital Cost
- Annual On-going costs (earned revenue / City General Fund split)
- Major Maintenance

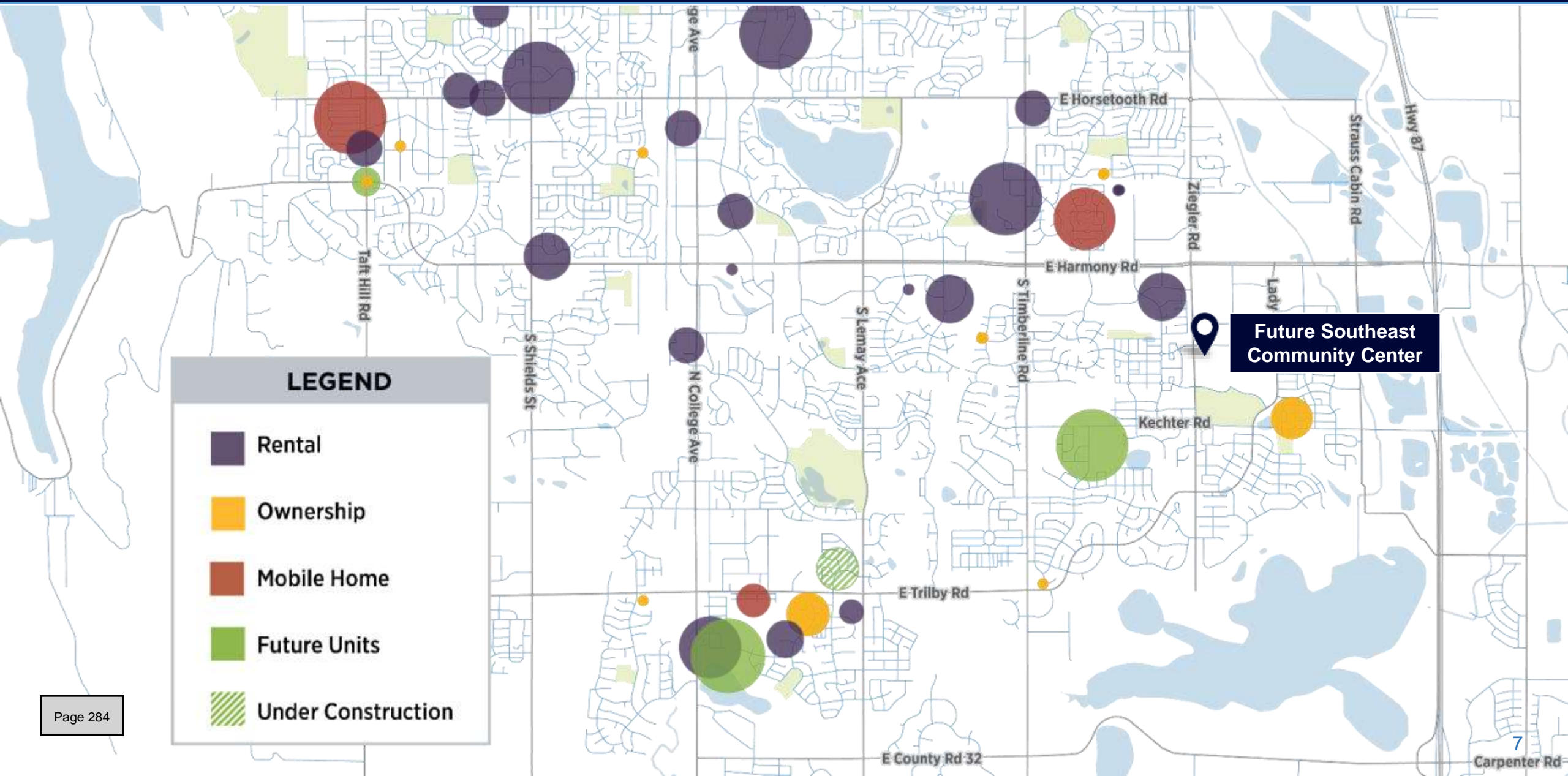
**COMMUNITY NEEDS/
FACILITY INCLUSIONS**

- Pools / Aquatics
- Childcare
- Recreation Spaces
- Community Spaces
- Creative / Innovation Spaces and facility integration
- Shared spaces (City/Library)
- Alignment with Policy, Plans, Studies

**COUNCIL AND
COMMUNITY PRIORITIES**

- Environmental Sustainability (LEED, water conservation, etc.)
- Resourcing vulnerable populations
- 15-minute City
- Making government accessible and fun
- Intergenerational spaces
- Building Community

Item 4. Affordable Housing Units

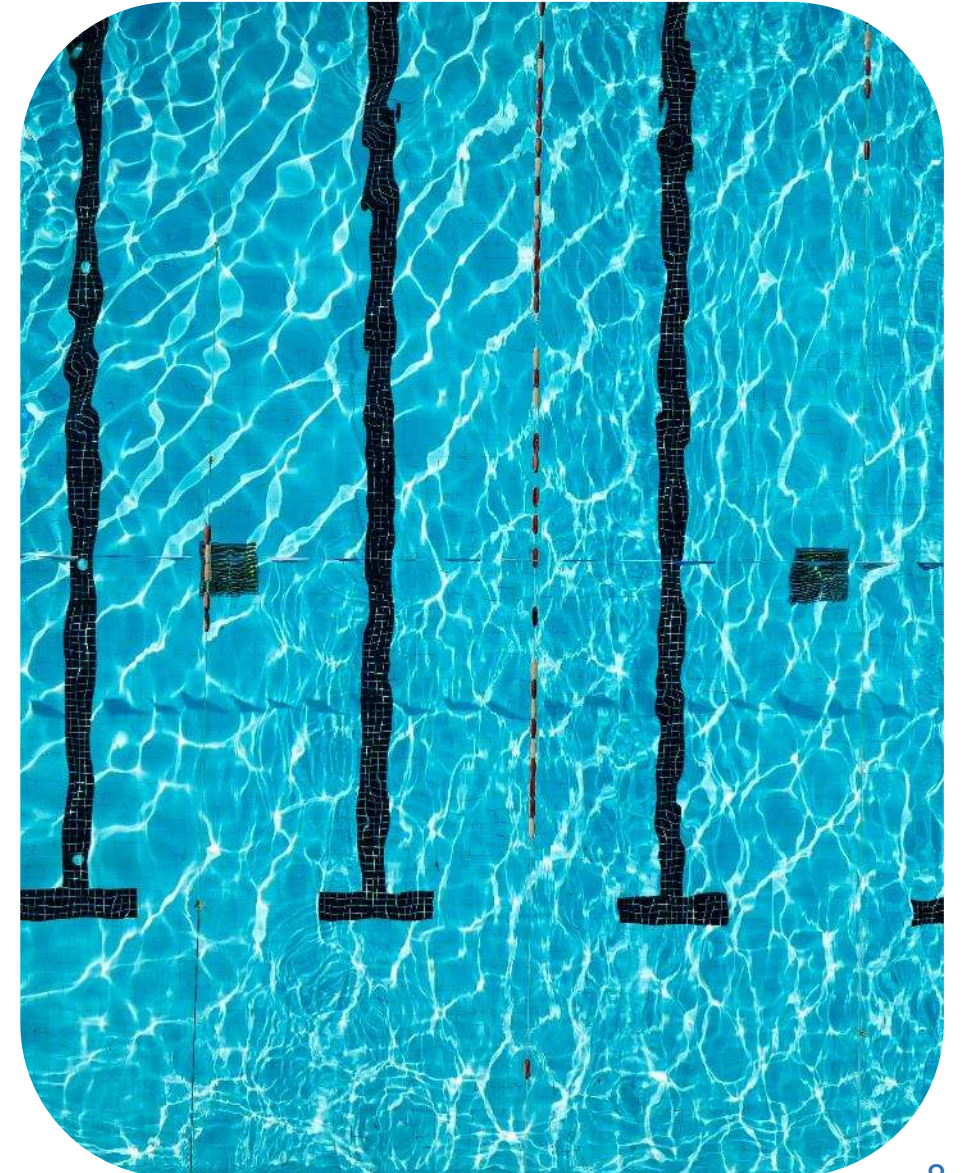


Starting Points:

- 2015 Ballot inclusions – Community Center and Outdoor Pool
- Library Partnership
- Indoor lap lanes with fair share (capital, operating, and major maintenance) agreement with PSD

Additional Opportunities:

- Scope and scale of Community Center
- Expansion of Outdoor Pool scope to extend season (separate pool or maybe design options to have a single pool operate both indoors and outdoors)



SIZE: 45,000-75,000 Sq. Ft.

TYPICAL AMENITIES:

- Weight/Cardio Room
- Indoor Track
- Pool/Aquatics
- Gymnasium
- Multipurpose Meeting Rooms
- Crafting/Maker Spaces
- Performance Spaces
- Concessions/Catering Kitchen
- Snacks

Existing Community Centers

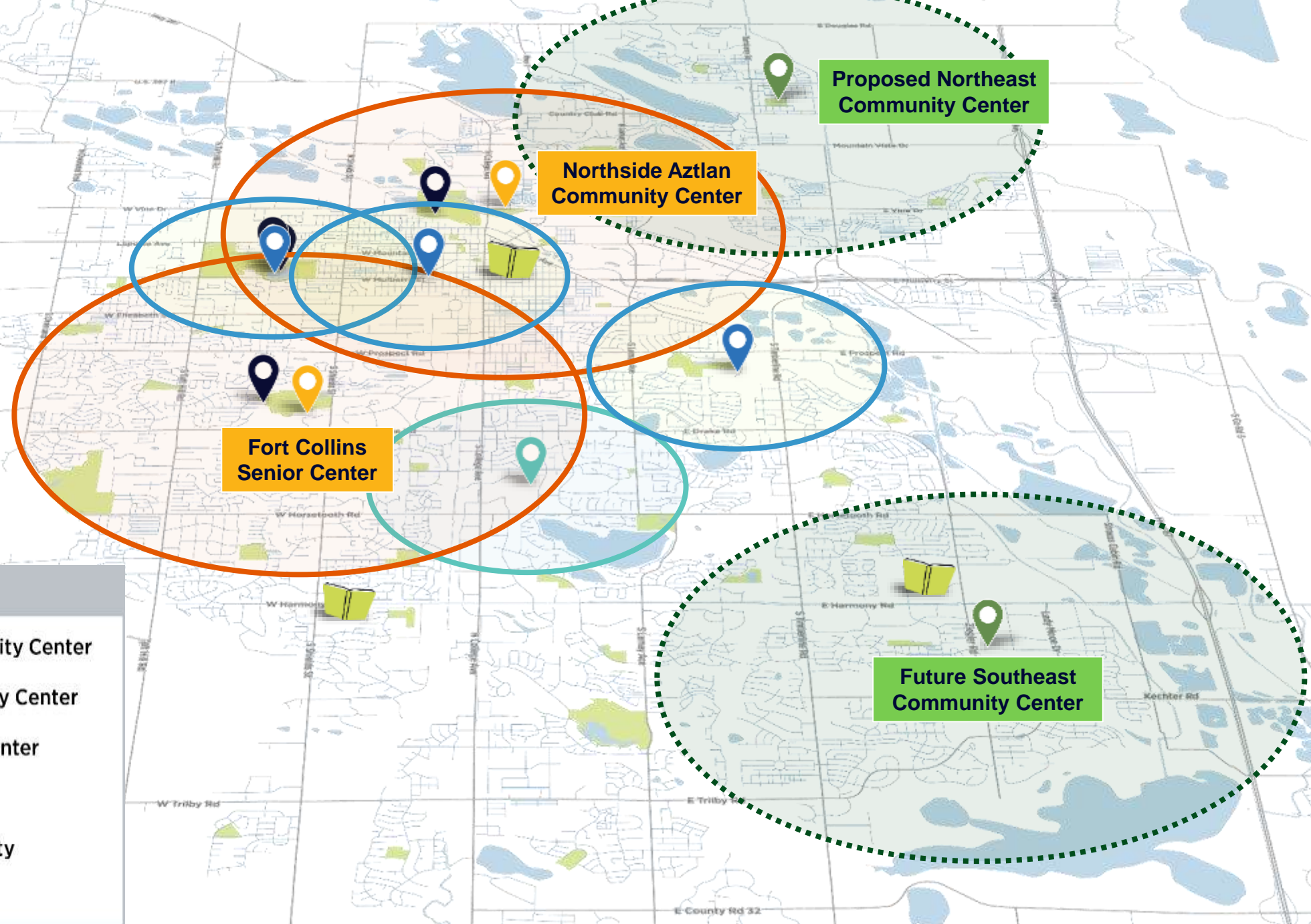
- Northside Aztlan Community Center
- Fort Collins Senior Center

Planned Community Center


- Southeast Community Center



Item 4.



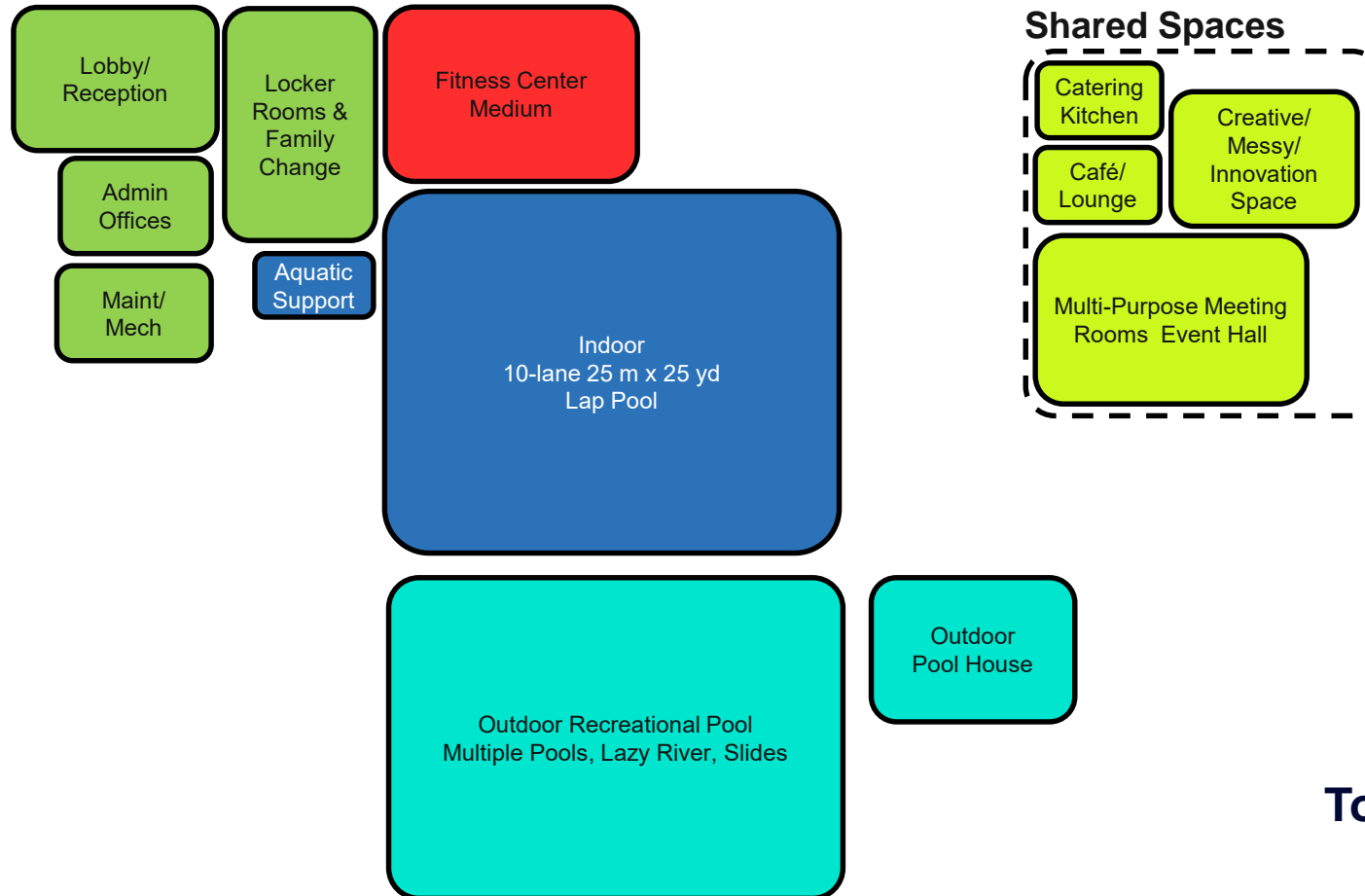
LEGEND

-  Existing Community Center
-  Future Community Center
-  Neighborhood Center
-  Aquatics Facility
-  Special Use Facility

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Item 4. Facility Option 1 – Not Recommended

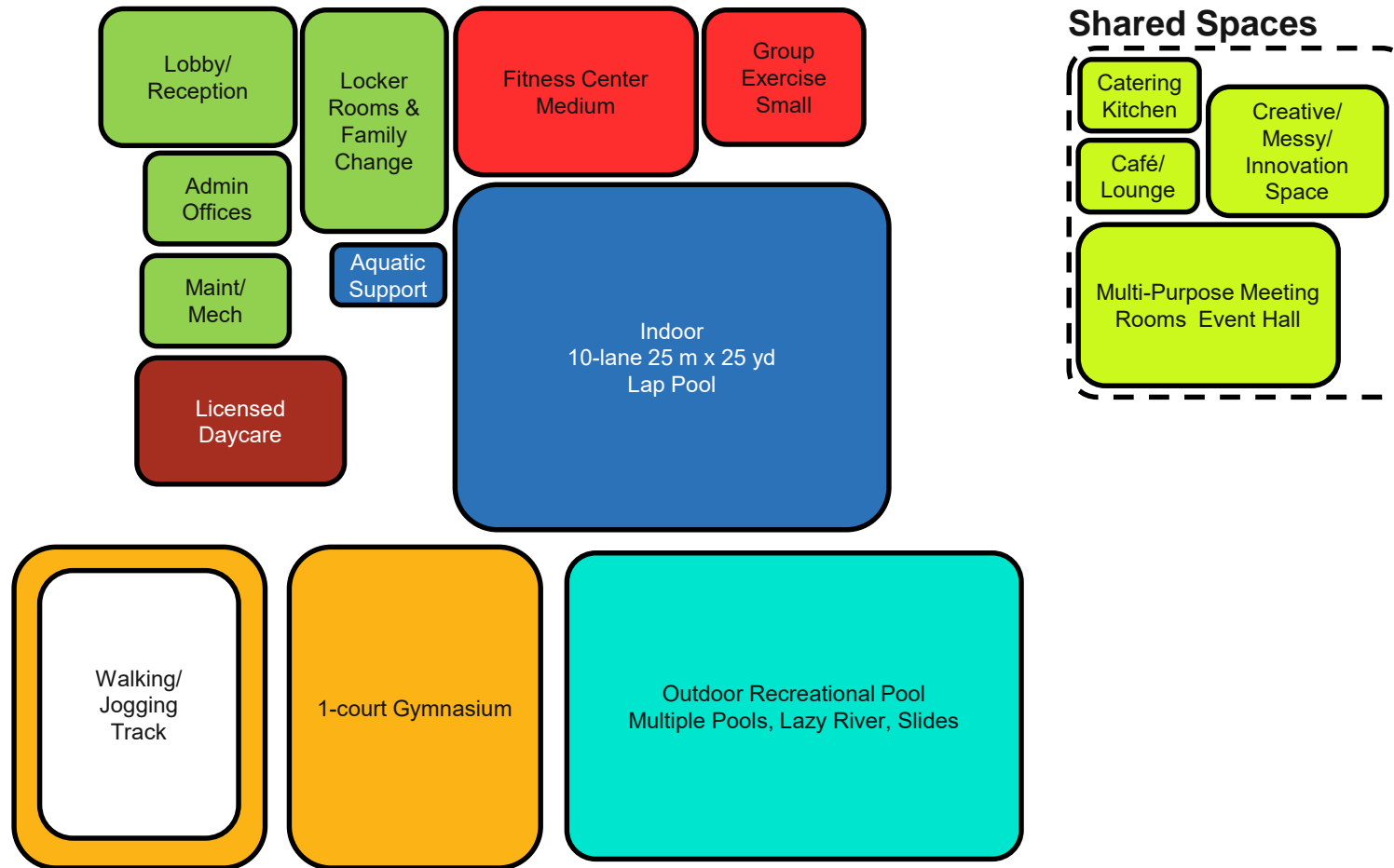
Estimated Cost Recovery: 34 – 42%
Estimated Annual General Fund Subsidy: \$1.3 – 1.5M



Total Area: 40-50,000 sf
Total Cost: \$51-61M

Item 4. Facility Option 2a – Not Recommended

Estimated Cost Recovery: 61 – 76%
Estimated Annual General Fund Subsidy: \$600,000 - \$900,000

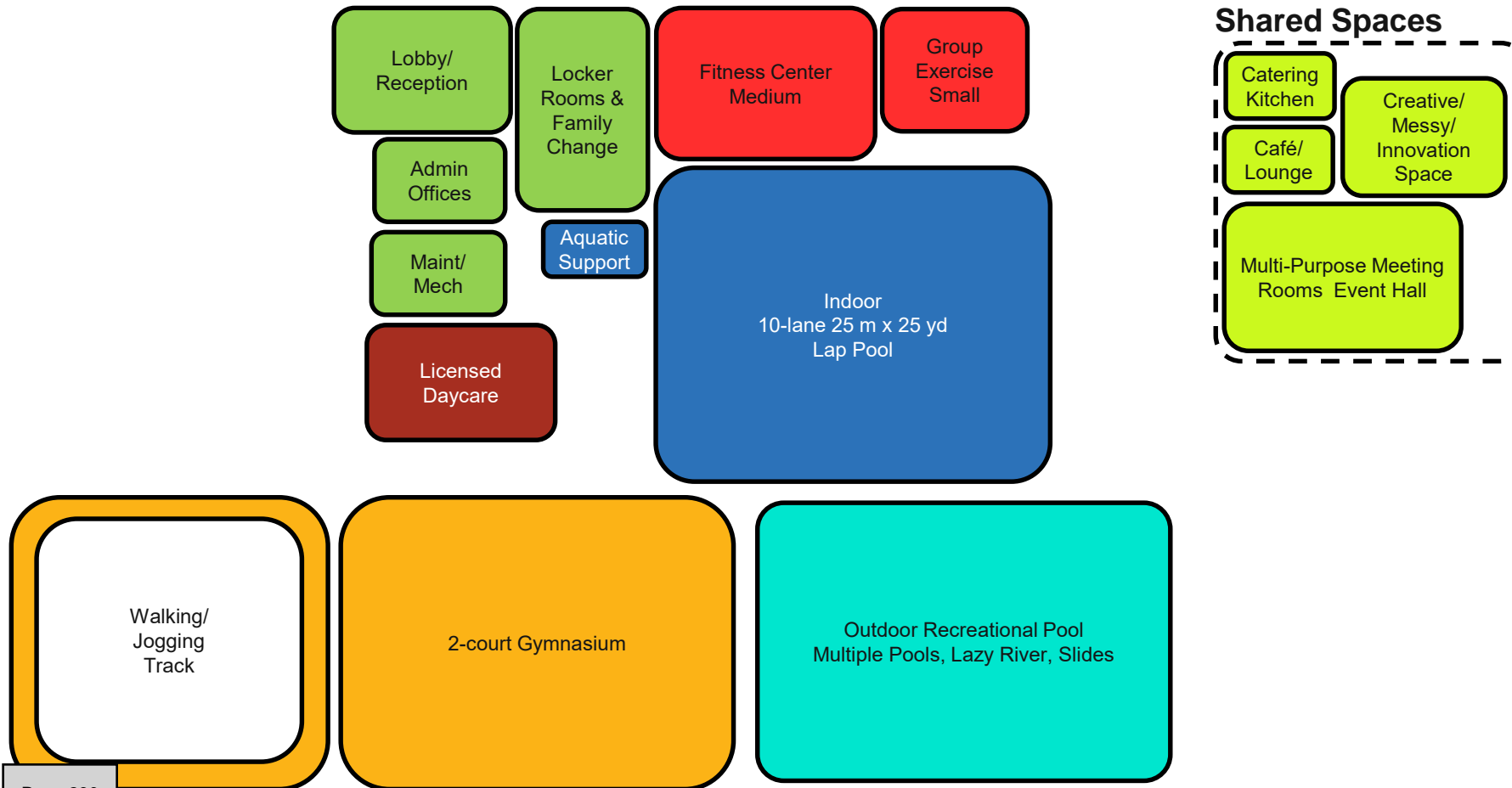


Total Area: 60-70,000 sf
Total Cost: \$64-74M

Item 4. Facility Option 2b - Recommended

Estimated Cost Recovery: 66 – 82%

Estimated Annual General Fund Subsidy: \$450,000 – \$850,000

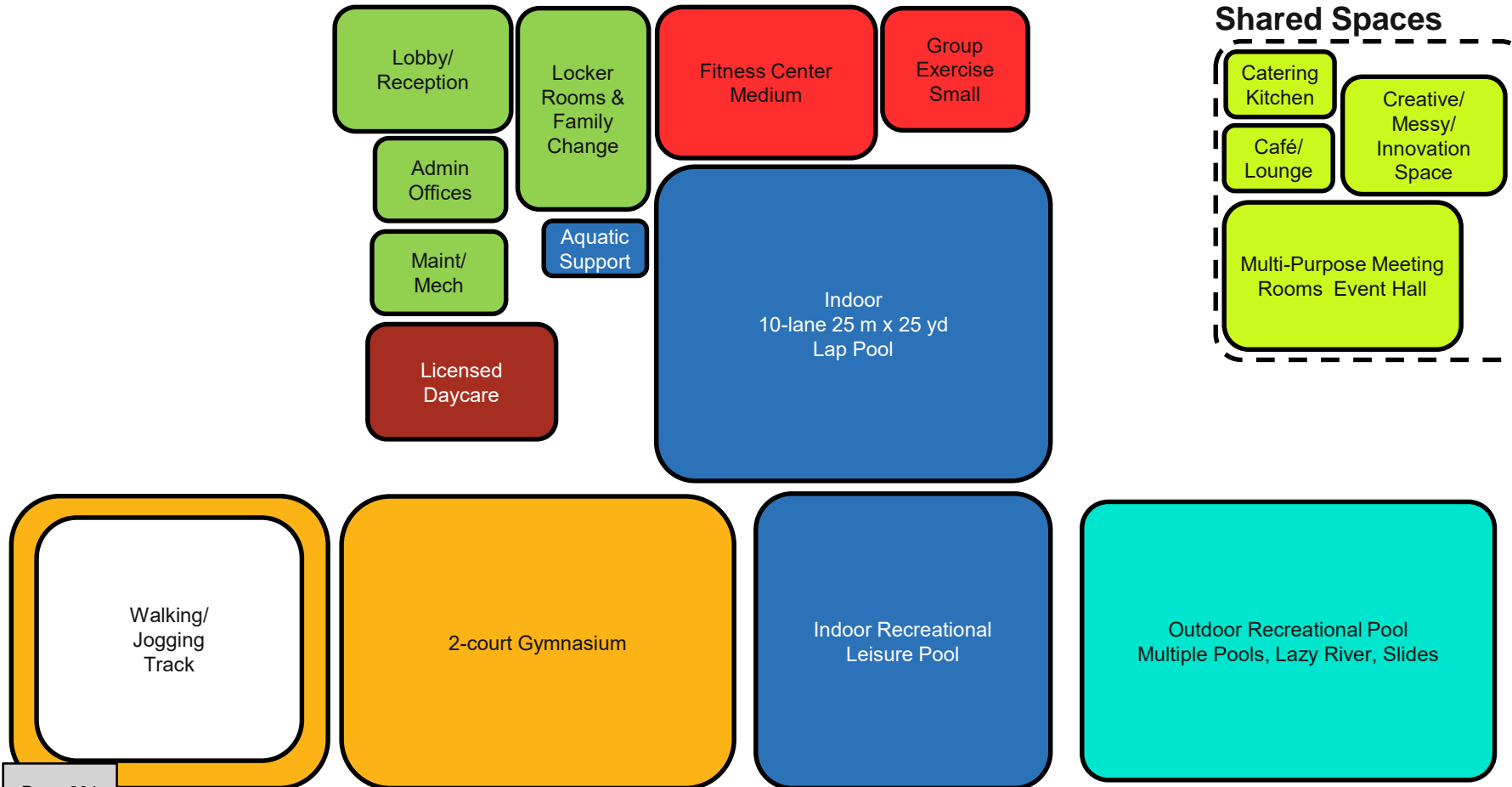


Total Area: 64-74,000 sf
Total Cost: \$68-80M

Item 4. Facility Option 3 – Not Recommended

Estimated Cost Recovery: 59 – 74%

Estimated Annual General Fund Subsidy: \$875,000 – \$1.4M



Total Area: 75-85,000 sf
Total Cost: \$84-94M

Item 4. Program	Option 1	Option 2a	Option 2b	Option 3
Proposed Amenities	40-50,000 sf ✓ Large Outdoor Recreation Pool ✓ 10-Lane Indoor Pool ✓ Small Fitness ✗ No Licensed Daycare ✗ No Group Exercise ✗ No Gymnasium ✗ No Walk/Jog Track	60-70,000 sf ✓ Large Outdoor Recreation Pool ✓ 10-Lane Indoor Pool ✓ Medium Fitness ✓ Licensed Daycare ✓ Small Group Exercise ✓ One Court Gym ✓ Smaller Track	64-74,000 sf ✓ Large Outdoor Recreation Pool ✓ 10-Lane Indoor Pool ✓ Medium Fitness ✓ Licensed Daycare ✓ Small Group Exercise ✓ Two Court Gym ✓ Larger Track	75-85,000 sf ✓ Large Indoor/Outdoor Recreation Pool ✓ 10-Lane Indoor Pool ✓ Medium Fitness ✓ Licensed Daycare ✓ Small Group Exercise ✓ Two Court Gym ✓ Larger Track
Program Diversity	Lowest	Medium	High	Highest
Usage (Annually):	Lowest	Medium	High	Highest
Construction Cost:	Lowest	Medium	Medium	Highest
Cost Recovery	Lowest	Medium	Highest	Medium
30-Yr. O&M General Fund Cost Est:	Highest	Medium	Lowest	High



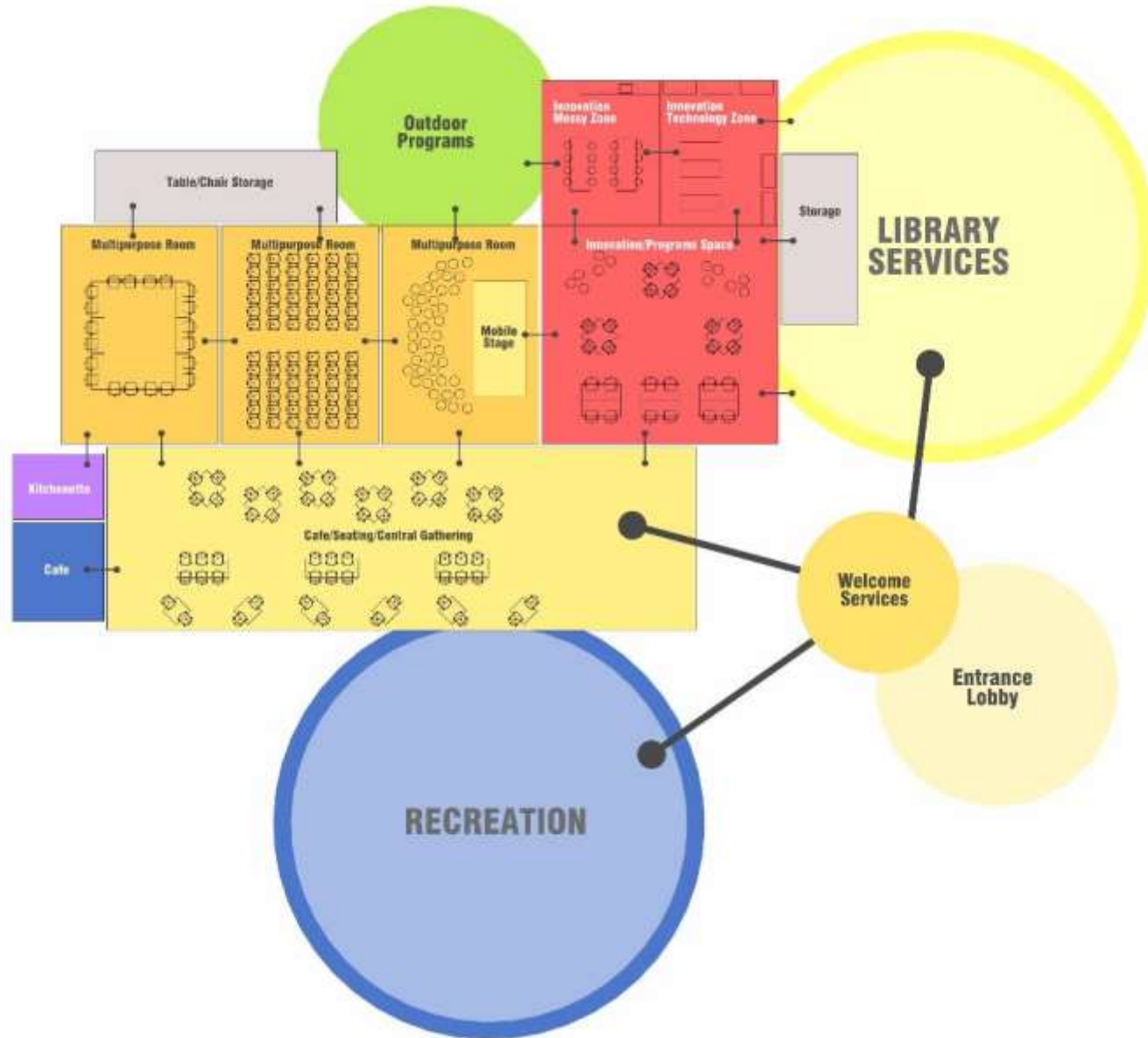
Zero-Depth
Beach Entry
Pool with
Play
Structure

Ample Deck
Space with
Shade
Structures

Lazy River and
Other Water
Features

Multiple Slides

Item 4. Shared Spaces - Organization





Views to outdoor uses

Comfortable, flexible seating

Fireplace feature



Multi-use
meeting rooms



That are
flexible to
expand



Flexible areas for projects and programs

Specialized areas for equipment

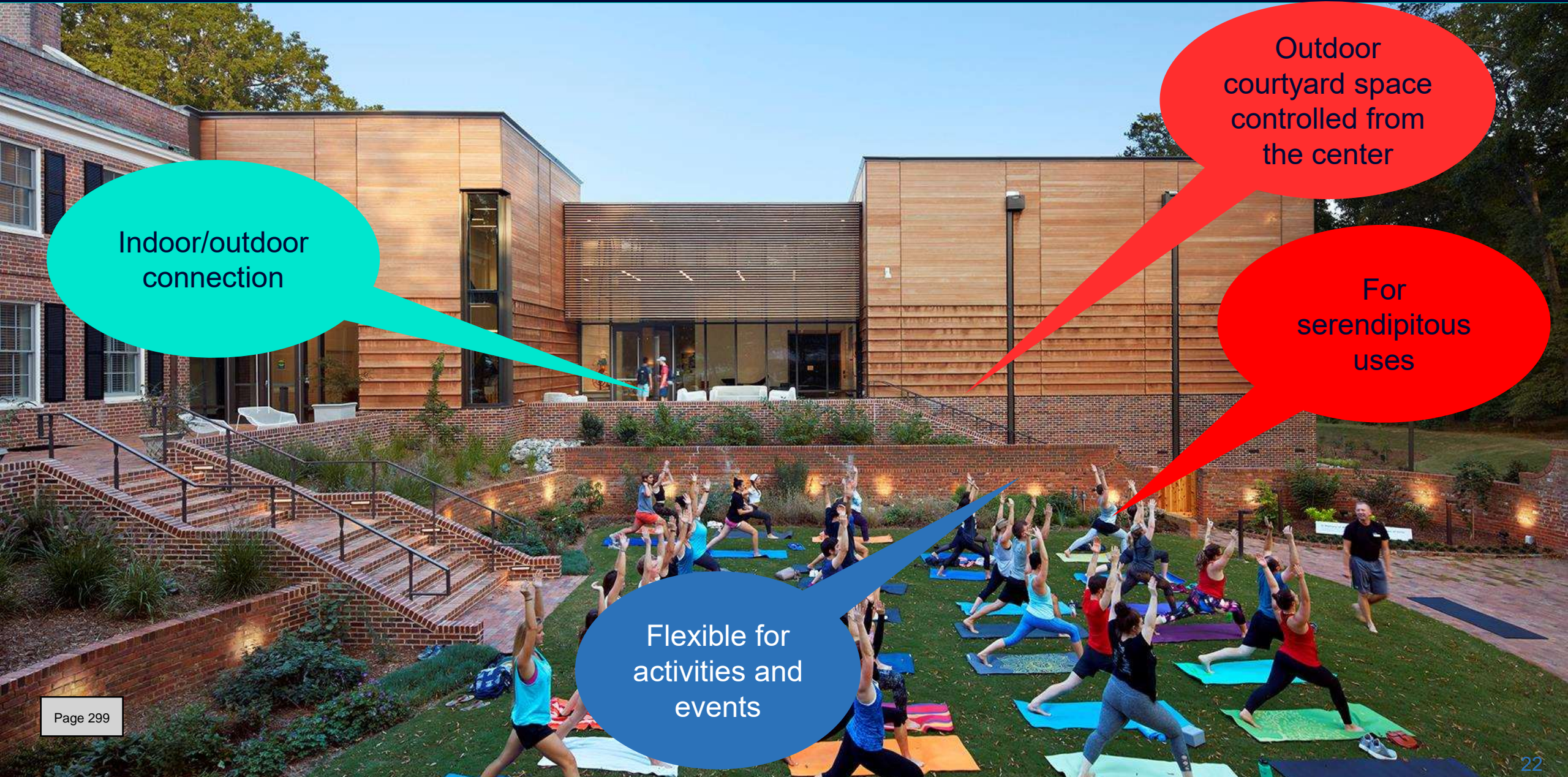
Item 4. **Shared Spaces - Café / Lounge**



Comfortable Seating, Plenty of daylight

Flexible Food Service Options

Seating spills into the common gathering areas



Indoor/outdoor connection

Outdoor courtyard space controlled from the center

For serendipitous uses

Flexible for activities and events

Potential Funding Scenarios (\$ in Millions)			
Bond against 2050 Tax Bond Proceeds	\$27	\$36	\$43
2050 Tax Reserves	\$10	\$10	\$12
CCIP Appropriated	\$18	\$18	\$18
CCIP Reserves	\$12	\$12	\$12
DOLA Grant	\$2	\$2	\$2
Recreation Reserves	\$1	\$2	\$3
Total City Funding for SECC	\$70	\$80	\$90
<i>% of 2050 Parks & Recreation Share</i>	<i>13%</i>	<i>17%</i>	<i>20%</i>

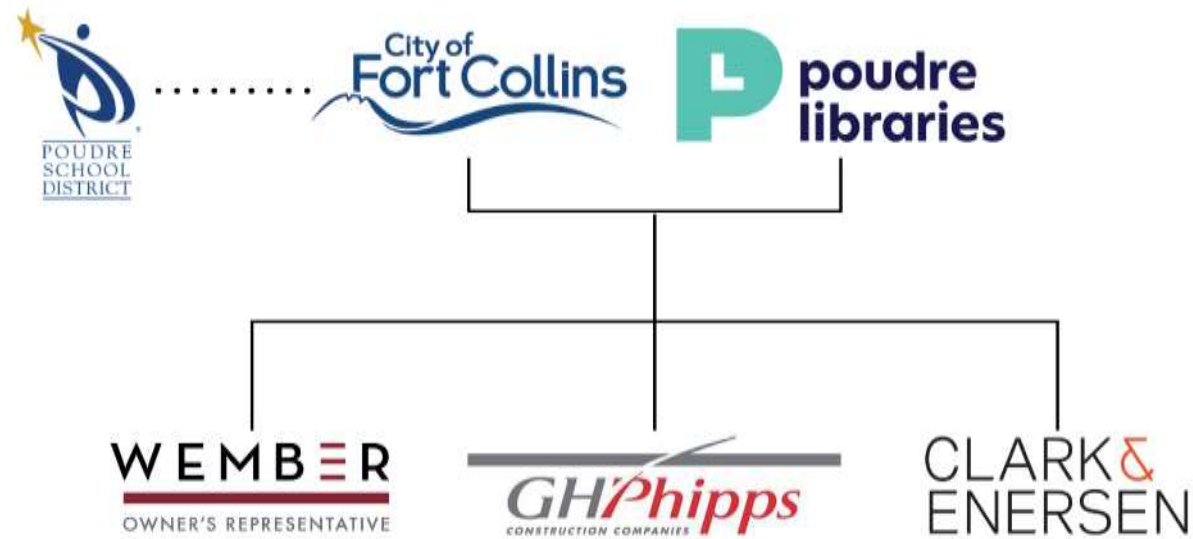
Assumptions			
Bond Years	20	20	20
Bond Rate	5.0%	5.0%	5.0%
Net Taxable Growth Rate	2.5%	2.5%	2.5%

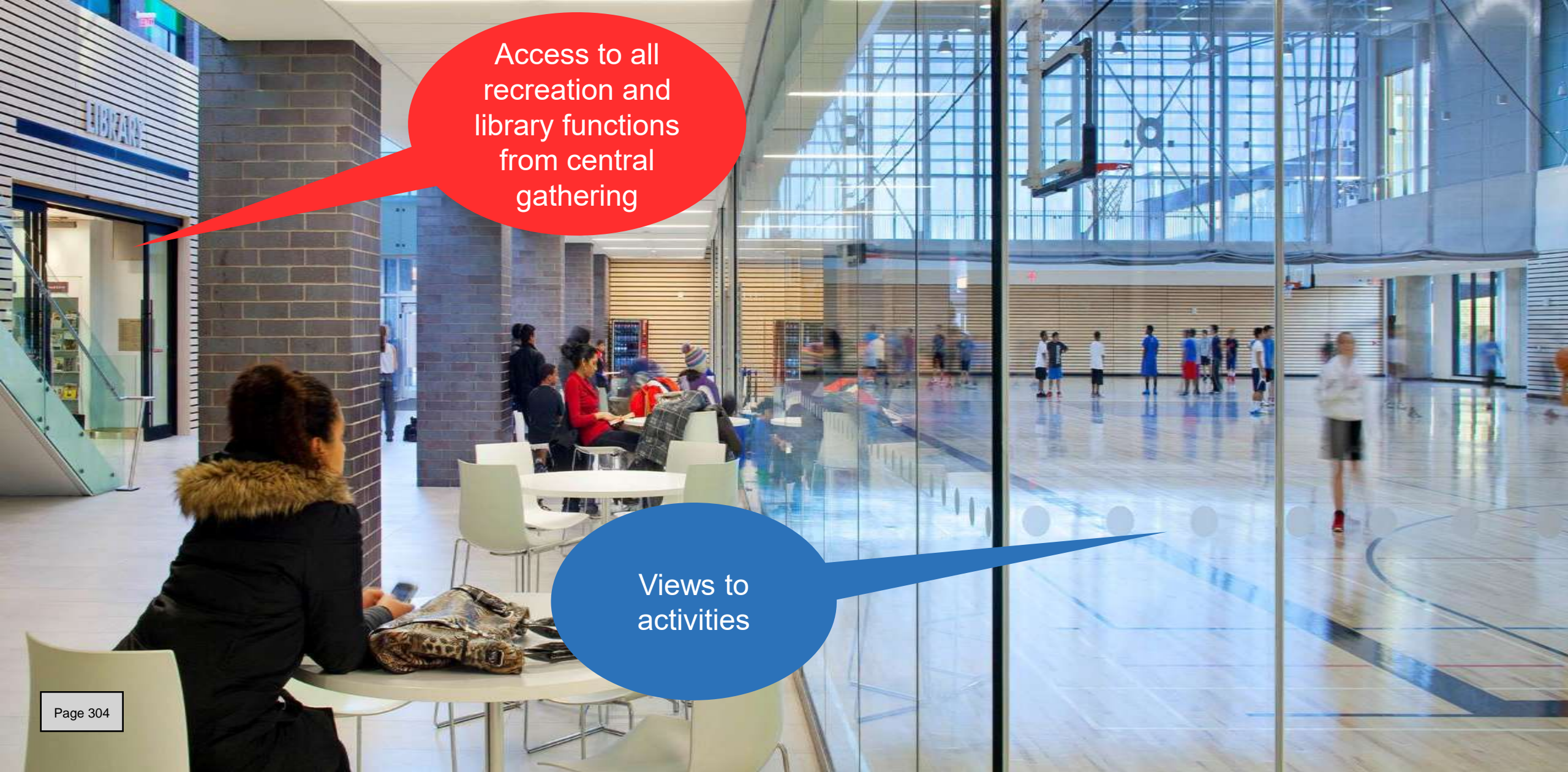
Assumptions	
Bond Years	20
Bond Rate	5.0%
Net Taxable Growth Rate	2.5%

What feedback do Councilmembers have on the proposed staff recommendation for scope and funding of the Southeast Community Center?



BACK UP SLIDES





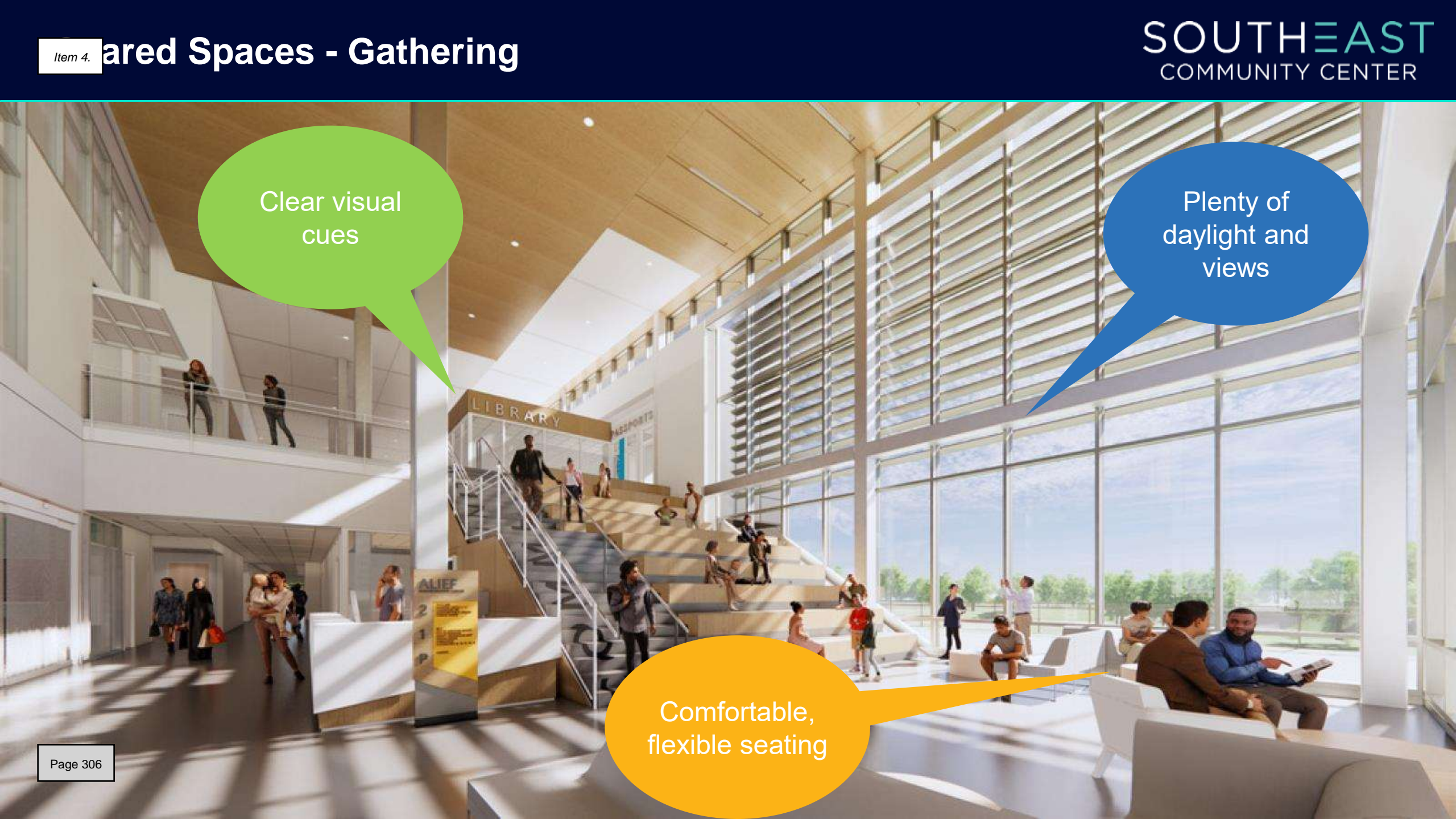
Access to all recreation and library functions from central gathering

Views to activities

Accessibility
and
Universal
Design

Circulation
doubles as
gathering

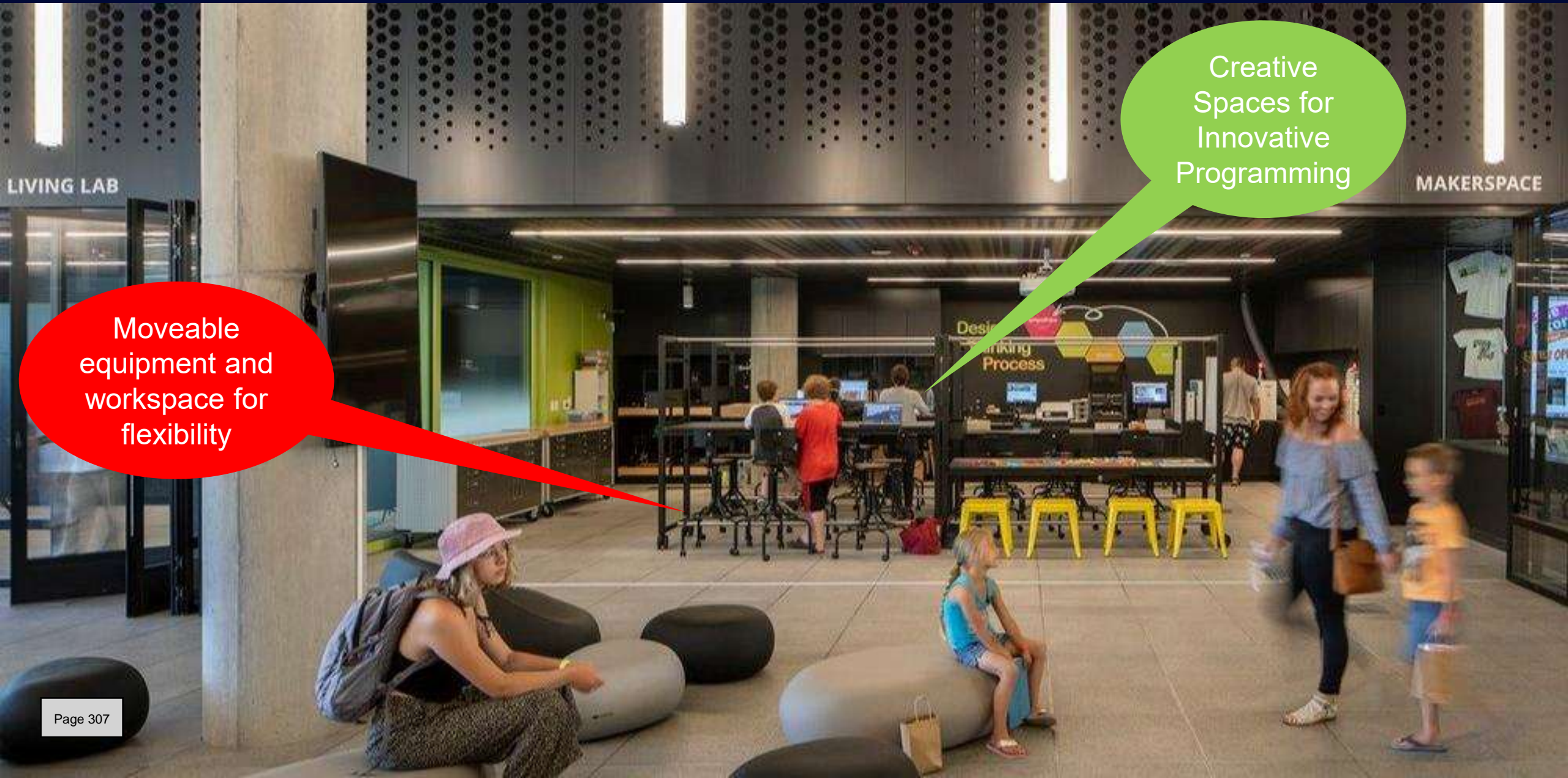


An architectural rendering of a modern, multi-level community center interior. The space is bright and open, featuring a large central staircase with people walking and sitting on it. To the right, there are large glass windows with horizontal blinds, providing a view of the outdoors. In the foreground, there are white, modular seating blocks where people are sitting and talking. A mezzanine level is visible on the left with a glass railing. The ceiling is made of light-colored wood panels. Three callout bubbles are overlaid on the image: a green one pointing to the staircase area, a blue one pointing to the large windows, and a yellow one pointing to the seating area.

Clear visual cues

Plenty of daylight and views

Comfortable, flexible seating



Moveable equipment and workspace for flexibility

Creative Spaces for Innovative Programming

Shared Spaces - Collaboration



Encourage
collaboration
and creativity

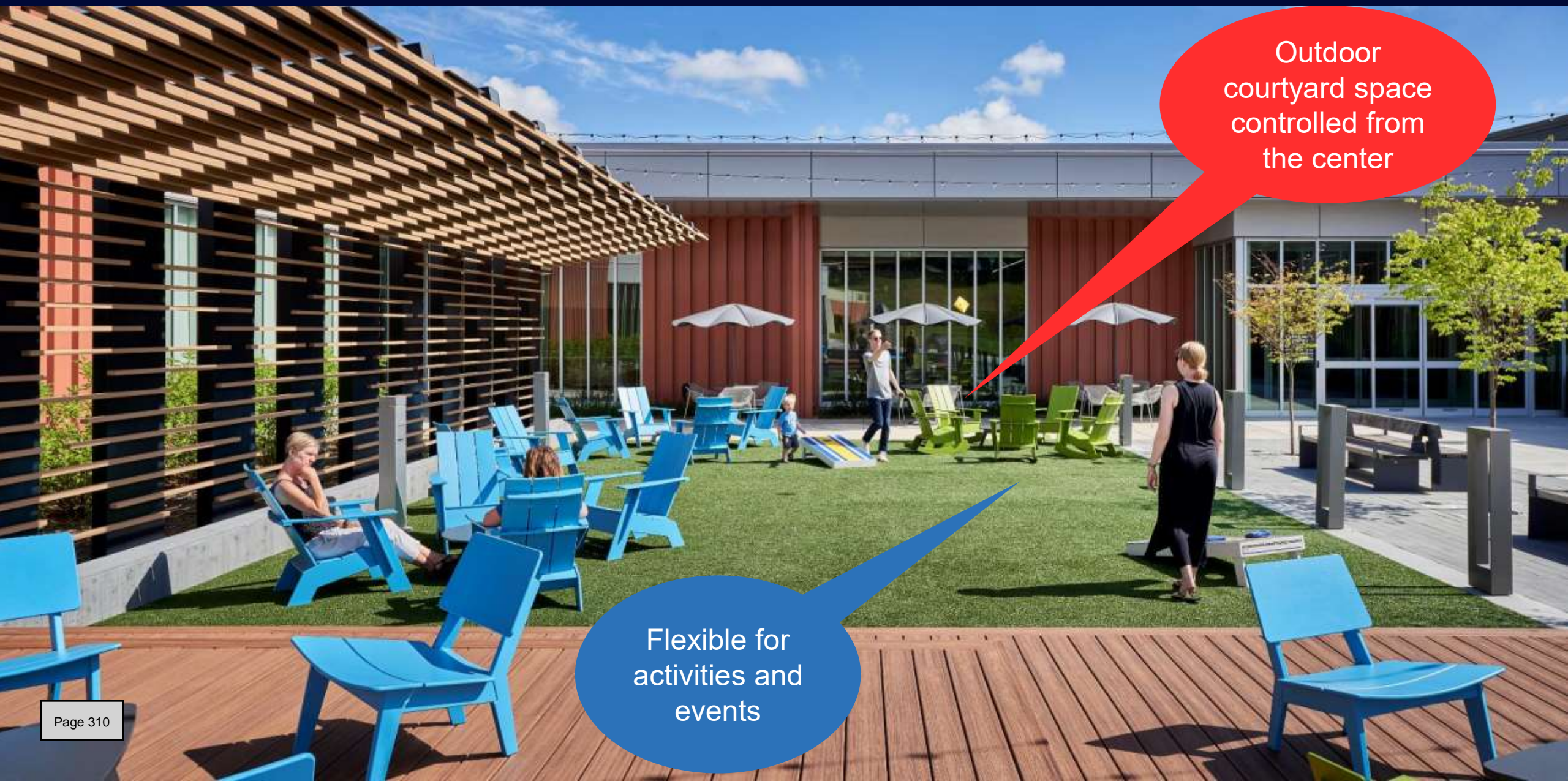
Spaces that
are
functional,
flexible and
comfortable

Item 4. **Shared Spaces – Indoor/Outdoor Connection**

Activity spaces that can expand to the outdoors, while maintaining control



Item 4. Shared Spaces – Indoor/Outdoor Connection



Outdoor courtyard space controlled from the center

Flexible for activities and events

- Facility size and capital cost is the City's portion of the facility including pools, recreation and shared spaces with Poudre Libraries.
- Estimates do not include Poudre Libraries square footage, capital or operating costs.
- Estimated operational costs do not include Poudre Libraries or PSD share of operations, maintenance and asset management.

2050 TAX OVERVIEW:

- ½-cent sales tax
- Passed in November 2023
- Expires in 2050
- Spending shall supplement and not replace
- Allocations: 25% Transit, 25% Climate, and 50% for Parks & Recreation

**2050 Parks and Recreation
Tax Language**

Replacement, upgrade, maintenance, and accessibility of parks facilities and for the replacement and construction of indoor and outdoor recreation and pool facilities

FUNDING SOURCE	TOTAL
2015-25 CCIP (existing)	\$17M
DOLA Resilience Grant (existing)	\$2M
CCIP Reserves (Council option)	\$10M
2050 (Council option – combination of 2050 reserves + bonding)	\$31M - \$36M
COMBINED	\$60M - \$65M

How should 2050 P&R tax be split between eligible elements?

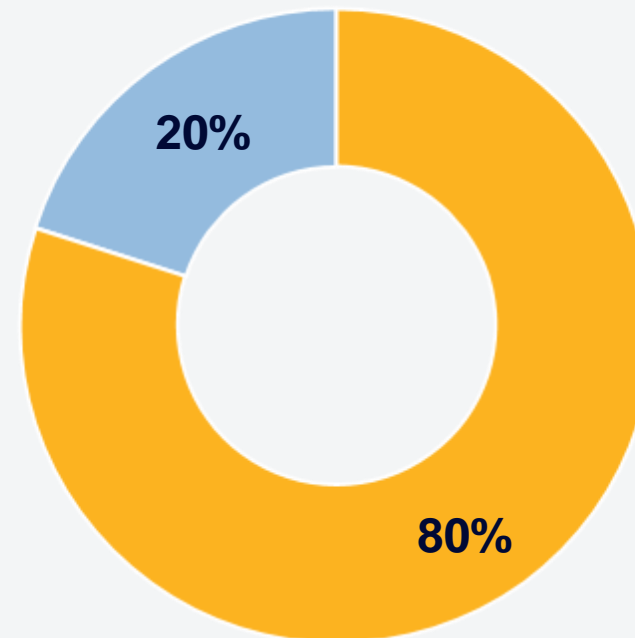
LIFE OF TAX = 27 YEARS

\$10.5M (2024 dollars) x 27 years
= **~\$283 million**

~80% = ~\$227M replacement/update
= **~\$8.4M/year**

~20% = ~\$57M replacement and construction of indoor and outdoor recreation and pool facilities
= **~\$2.1M/year**

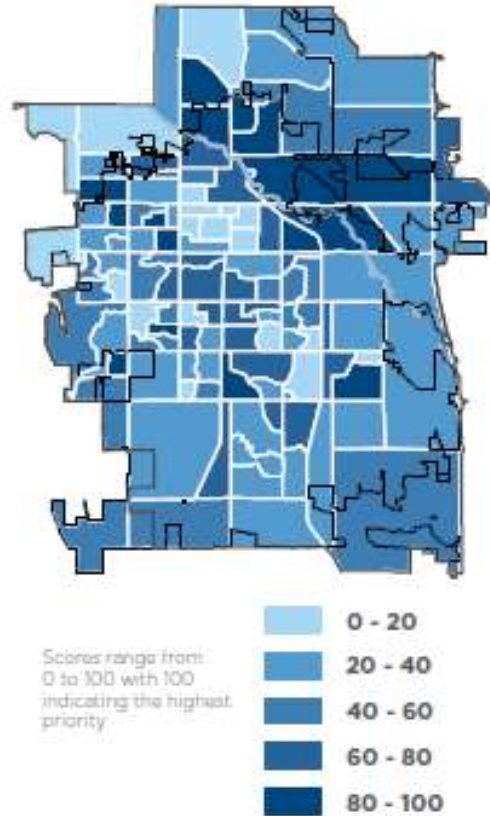
PROPOSED SPLIT OF 2050 PARKS AND REC. FUNDS



80% - Allocated for the replacement, upgrade, and maintenance of parks and recreation amenities

20% - Allocated for the replacement and construction of indoor and outdoor recreation and pool facilities

Figure 18. Fort Collins Health Equity Index
Fort Collins City Plan, 2016
Source: Larimer County



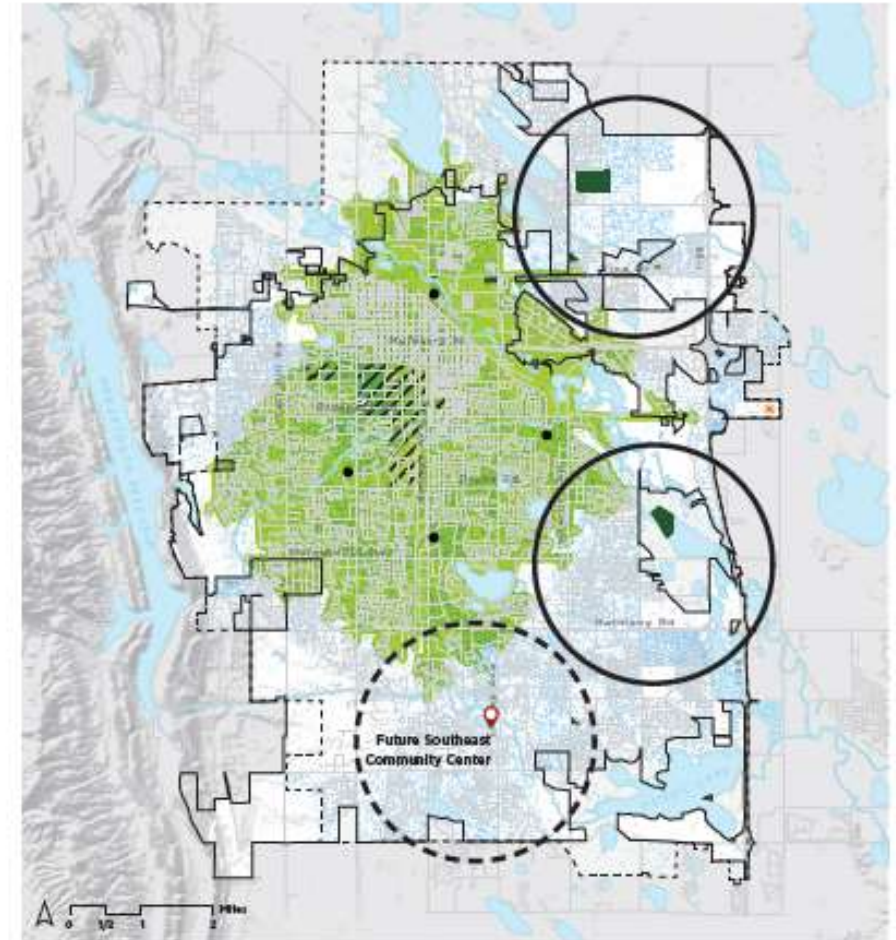
2.5 Promote public health and wellness through public spaces programming.

Nearly all (99%) residents of Fort Collins agree that parks, trails, recreation facilities, and programs improve physical health and fitness. Fitness and wellness programs were the second highest priority program for residents, and exercise and fitness equipment was the second highest priority for indoor facilities. Larimer County's Health Equity Index can be used to identify the highest priority areas of the city for addressing health and wellness.

Implementation Lead: Recreation

Implementation Partners: Community Services, Parks, Natural Areas

- 2.5.1 Enhance fitness, wellness, and healthy lifestyle programming.
- 2.5.2 Highlight the health and wellness benefits of recreation programs in informational materials.
- 2.5.3 Collaborate with local healthcare providers on a park prescription program.



Community Centers – Access Standard – 5-Minute Drive

