

# Fort Collins Water Efficiency Plan

## Engagement Synthesis

*August 31, 2024*

### Table of Contents

|   |          |
|---|----------|
| <b>Summary of Key Takeaways</b>   | <b>2</b> |
| 1) What water conservation and efficiency strategies (e.g., programs, incentives, policies, education) are the public most interested in?           | 3        |
| 2) What are the public’s values and sentiments related to equity as it pertains to water conservation and uses?                                     | 3        |
| 3) What are the public’s top concerns around water conservation, and how strongly are those concerns held? Will those concerns drive public action? | 3        |
| 4) What is the public’s appetite for mandates versus incentives?  | 4        |
| 5) What are the gaps in our existing public outreach approach?  | 4        |
| 6) What are the potential drivers for individual action on water efficiency?  | 5        |
| 7) What are effective methods for reaching both general and priority audiences?   | 5        |
| <b>Introduction</b>   | <b>6</b> |
| The Engagement Plan   | 6        |
| <b>Overview of Engagement Efforts</b>   | <b>8</b> |
| City Staff Engagement   | 8        |
| Roadshow  | 8        |
| Focus Groups  | 9        |
| Informational Interviews  | 9        |
| Community Engagement  | 10       |
| Community Consultants Program   | 10       |
| Community-Wide Survey   | 11       |
| Climate Equity Committee  | 12       |
| Community Events  | 12       |
| Informational Interviews  | 13       |

|  |           |
|--|-----------|
| <b>Engagement Results</b>                                      | <b>14</b> |
| Community Consultants  | 14        |
| Most Common Sentiments and Concerns                            | 15        |
| Suggestions for Utilities                                      | 17        |
| Equity Considerations  | 20        |
| Theory of Change: Incentives versus Regulations                | 20        |
| Climate Equity Committee                                       | 21        |
| Equity Priority Community Engagement                           | 21        |
| Utilities-Attended Events                                      | 23        |
| Landscape Professionals Meeting                                | 27        |
| Community Champions Meeting                                    | 28        |
| Colorado State University Student Sustainability Center Events | 29        |
| People First Meeting   | 30        |
| NoCoBiz Connect  | 31        |
| Survey Analysis  | 32        |
| Methodology  | 32        |
| Respondent Demographics  | 33        |
| Survey Results   | 42        |
| Analysis of Open-Ended Responses                               | 53        |
| Recommendations  | 61        |
| <b>Vetting the Equity Evaluation</b>                           | <b>65</b> |
| Findings   | 65        |
| Other Takeaways  | 66        |
| <b>Evaluation of Engagement Plan</b>                           | <b>67</b> |
| Suggestions for Future Engagement                              | 69        |
| Messaging  | 70        |
| Priority Stakeholder Groups                                    | 70        |
| Data Collection  | 71        |
| <b>Appendix A. Water Efficiency Plan Survey Questions</b>      | <b>73</b> |
| <b>Appendix B. Survey Analysis Methodology</b>                 | <b>80</b> |

## 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                       |
| <b>Total Attendees</b> |           |                             | <b>29</b>            |                         |

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

**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.*

| <b>Community Meetings Attended by Utilities Staff</b> |   |  |                  |
|---|---|--|------------------|
| <b>Date</b>   | <b>Meeting</b>  | <b>Stakeholders</b>                                      | <b>Attendees</b> |
| 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<br>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<br>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<br>Spanish speakers<br>Students    | compliance with water regulations. Wealthier residents and businesses can afford fines and fees and not change behavior.<br>Difficulty in learning and tracking changing water use rules and regulations. |
| Water quality                         | Mobile home park residents<br>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<br>Students<br>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<br>Conservation<br>Indigenous           | Concern over the Poudre River's flow and quality of the watershed and ecology.  |
| Homeowners associations and landlords | Mobile home park residents<br>Renters<br>Students | Encouraged to use more water and prevented from adopting water-wise landscaping.<br>Not enough emphasis from homeowners associations and landlords on water conservation and efficiency.                  |
| Affordability                         | Business<br>Students<br>Renters                   | Concerns about water affordability and the impact of water rates. Lack of knowledge on surge pricing.   |
| City leadership and action            | Students<br>Renters<br>Religious<br>Conservation  | Recognition of the importance of City landscaping and seeing the City act and model water-wise practices.<br>Reevaluate gardens and recreational fields.  |
| Education and Communications          | Students<br>Renters<br>Religious<br>Elders        | Improve access to resources.<br>Provide education on native plants, water-wise landscaping, etc. Integrate water conservation into school education.  |

|  |              |  |
|--|--------------|--|
|  | Conservation |  |
|--|--------------|--|

**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<br>Incentives for xeriscaping<br>Educational programming and resources | All               |

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

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



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

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

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

## 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

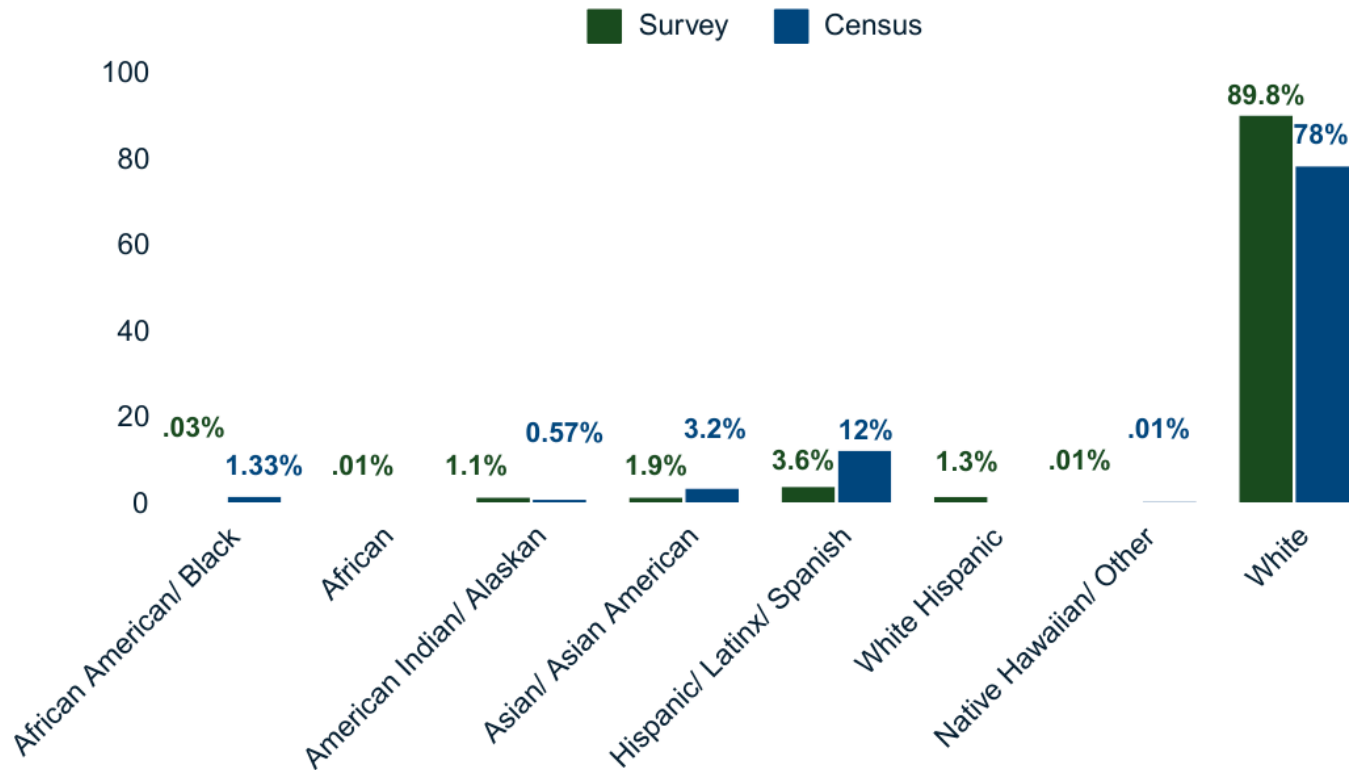


Figure 2. Race and ethnicity data reported from 799 respondents.

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

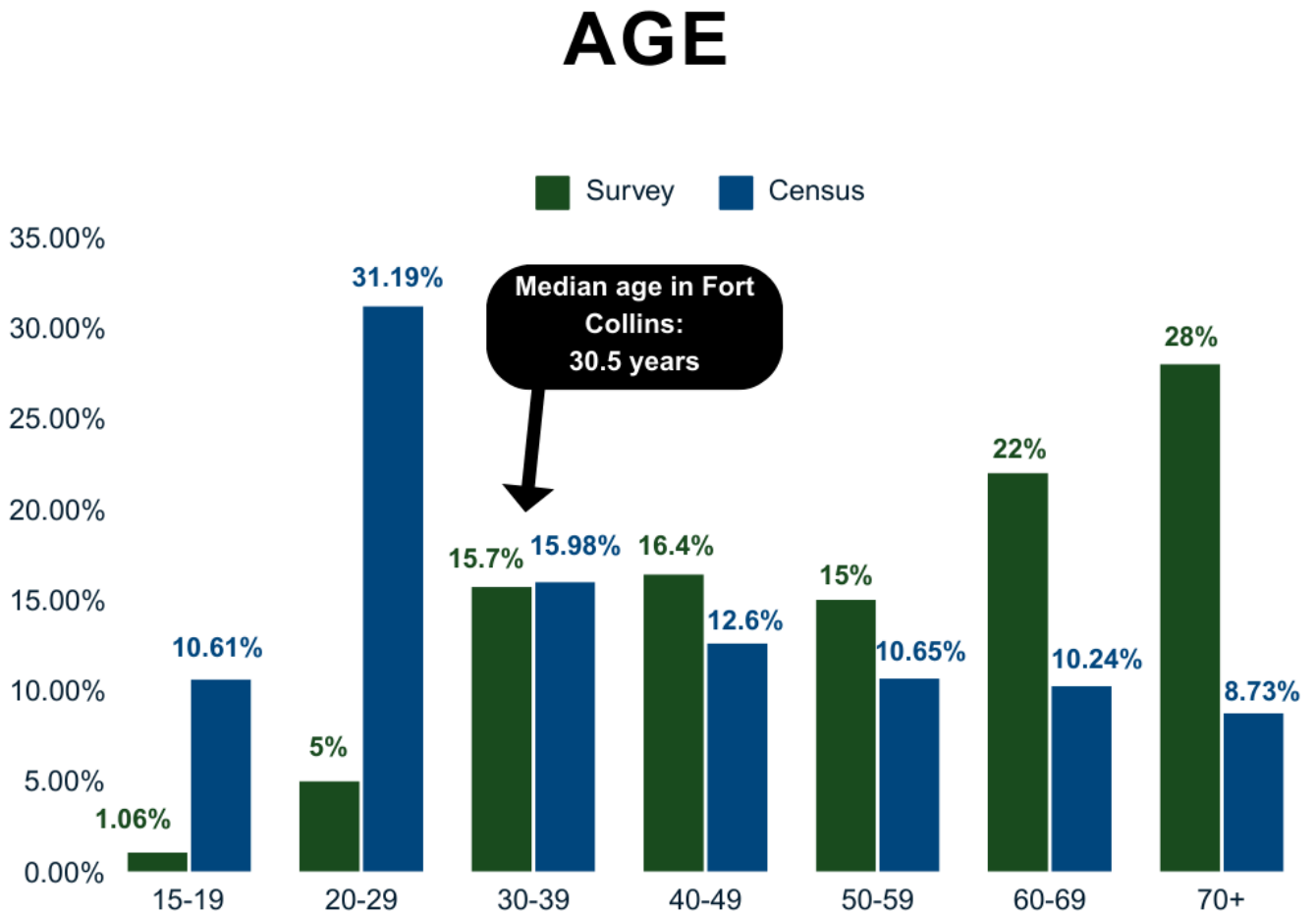


Figure 3. Race and ethnicity data reported from 798 respondents.

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

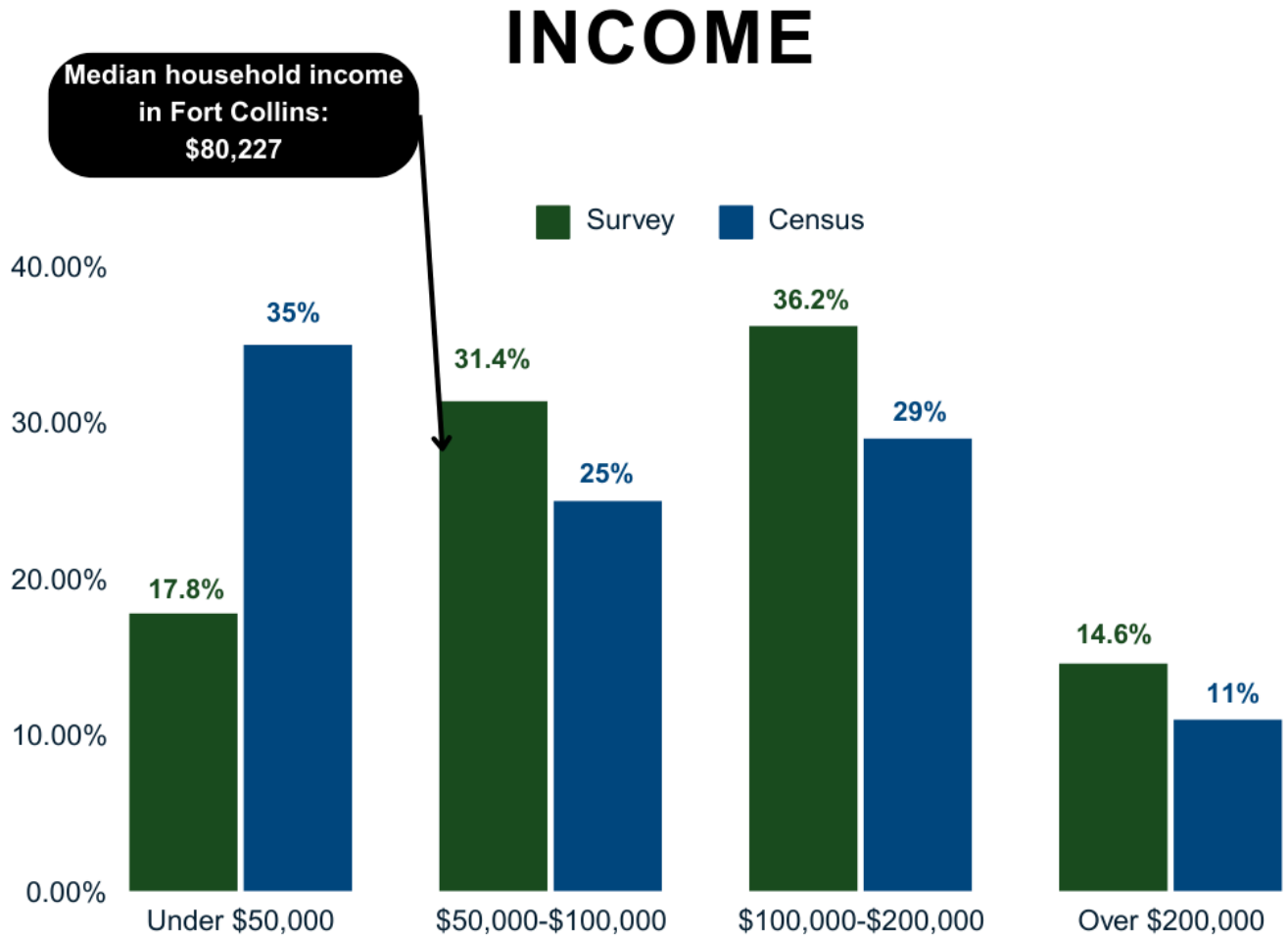


Figure 4. Age data reported from 794 respondents.

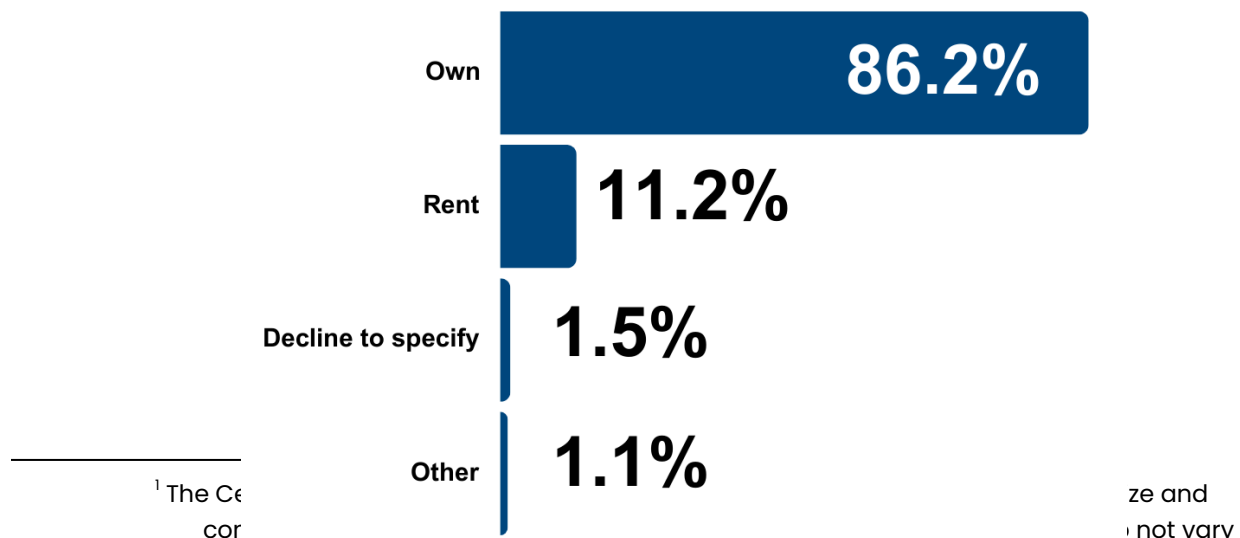
The household income reported by respondents was slightly higher than that of the broader Fort Collins population. According to Census data, the median household income in Fort Collins is \$80,227 and 40 percent of the City’s population reports an income of \$100,000 or more, while 45 percent of the 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.<sup>1</sup> 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?



<sup>1</sup> The Census Bureau's poverty threshold is geographically specific, 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

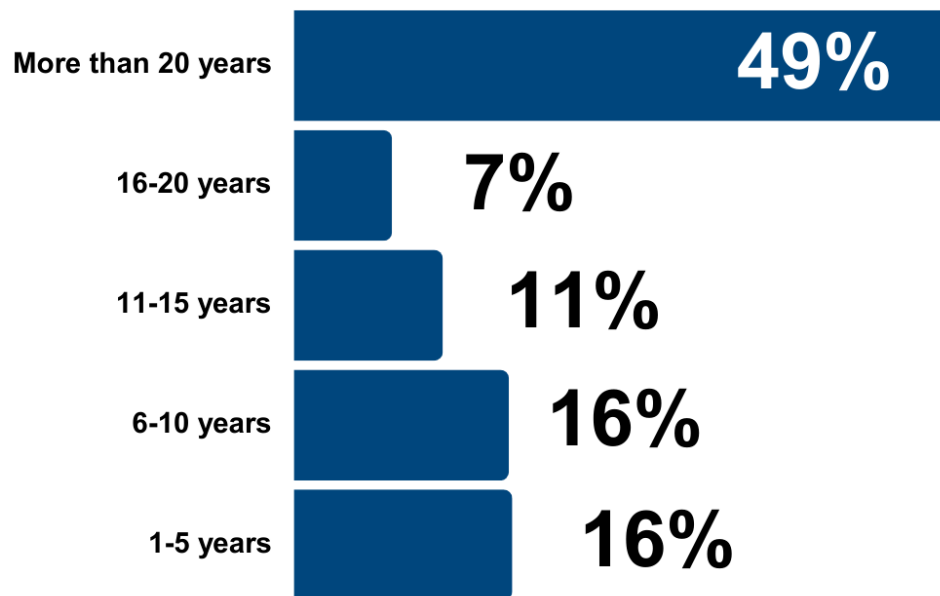


Figure 6. Residency data reported from the 796 demographic survey respondents.

### 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?

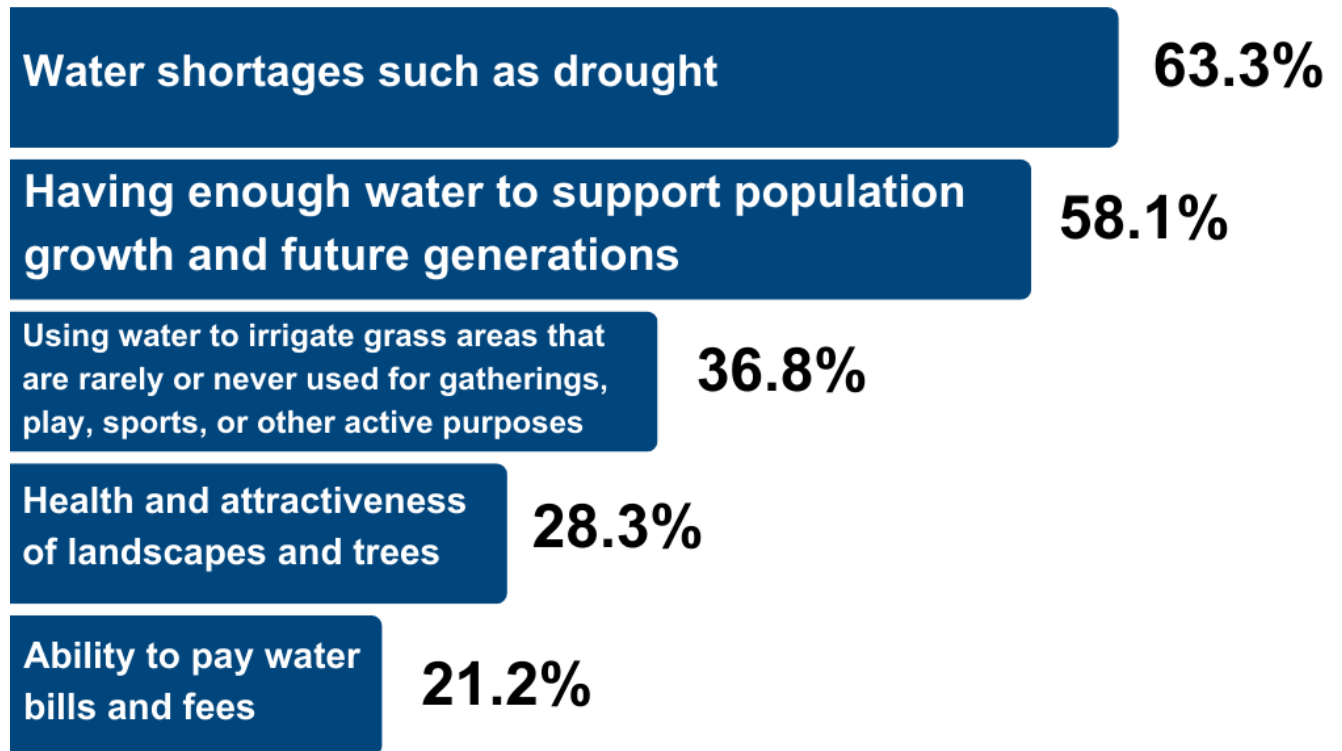


Figure 7. Respondents were asked to select up to three most important concerns related to water use in Fort Collins. The five options in the figure above garnered the most selections.

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?

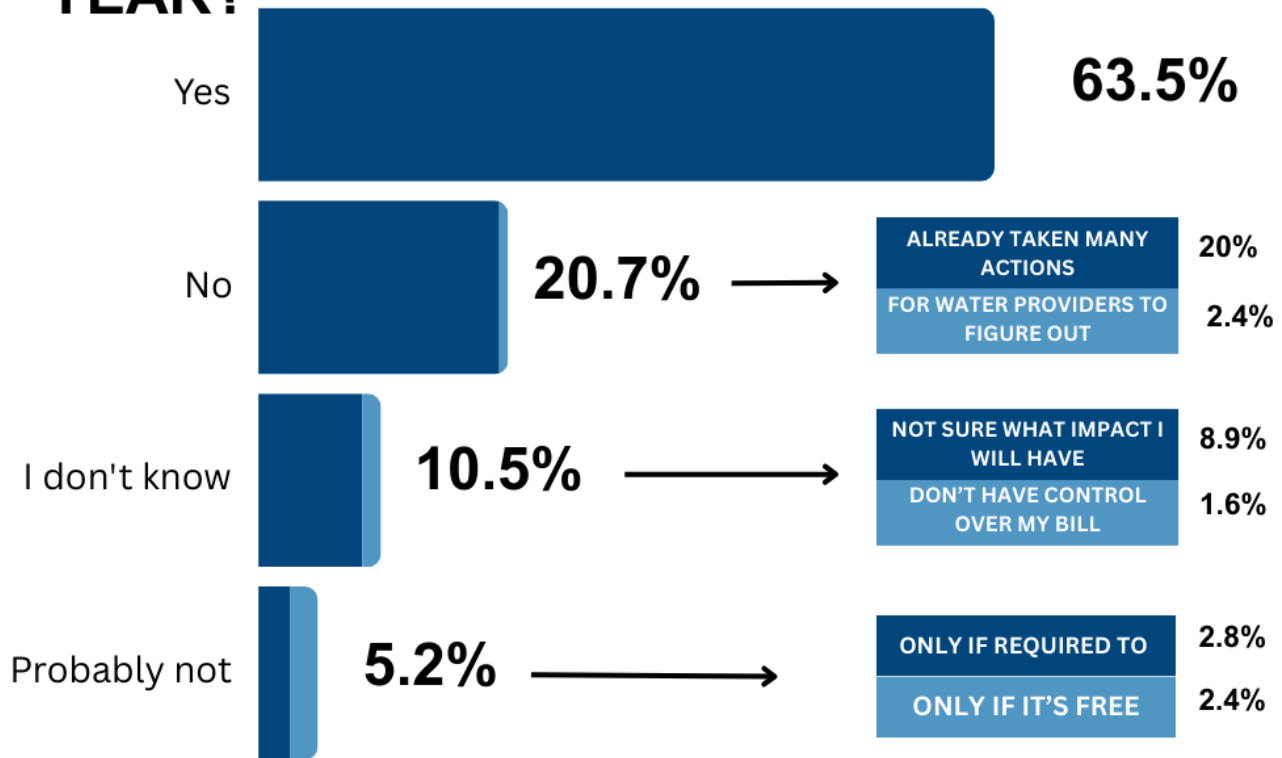


Figure 8. Respondents' willingness to take individual action to reduce water use in the next year.

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?

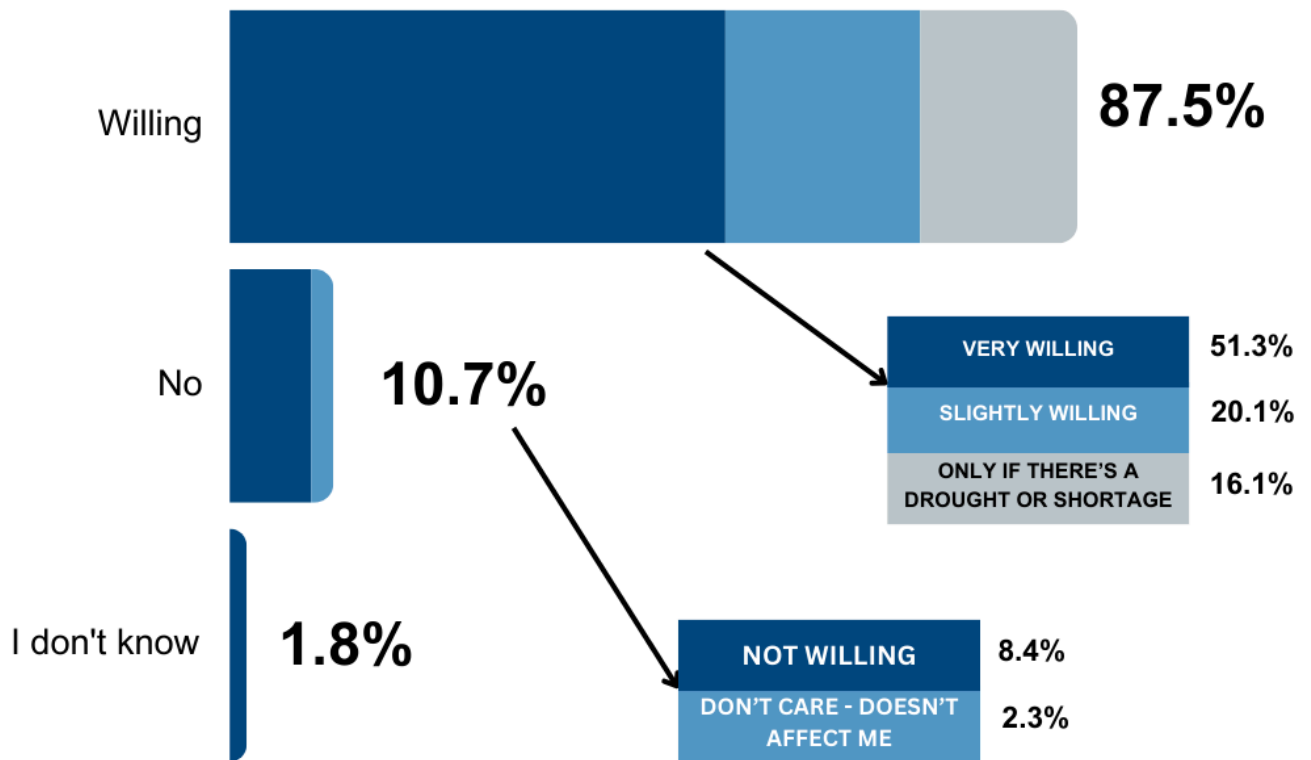


Figure 9. Respondents' willingness to accept new, required actions that limit how or when people water lawns.

### 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?

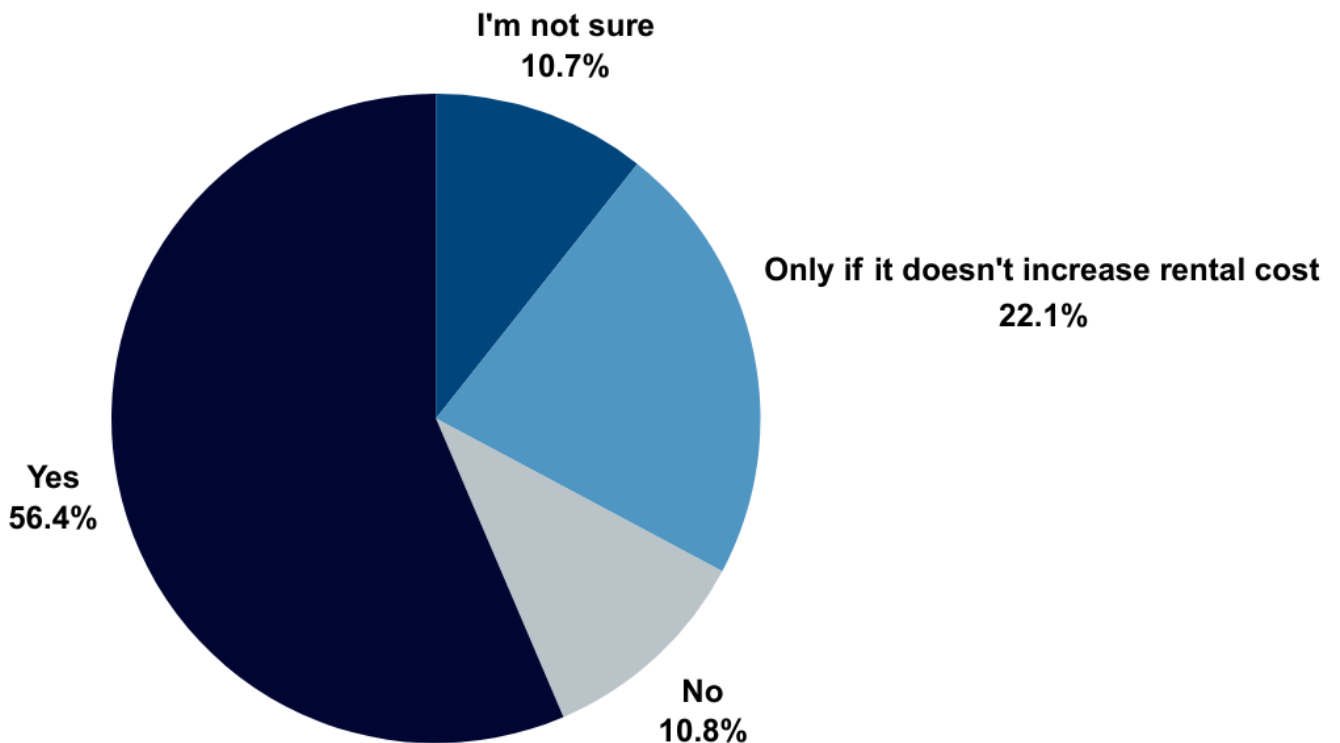


Figure 10. Respondents' beliefs on whether property owners should be required to make upgrades to improve indoor or outdoor water efficiency.

### 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?

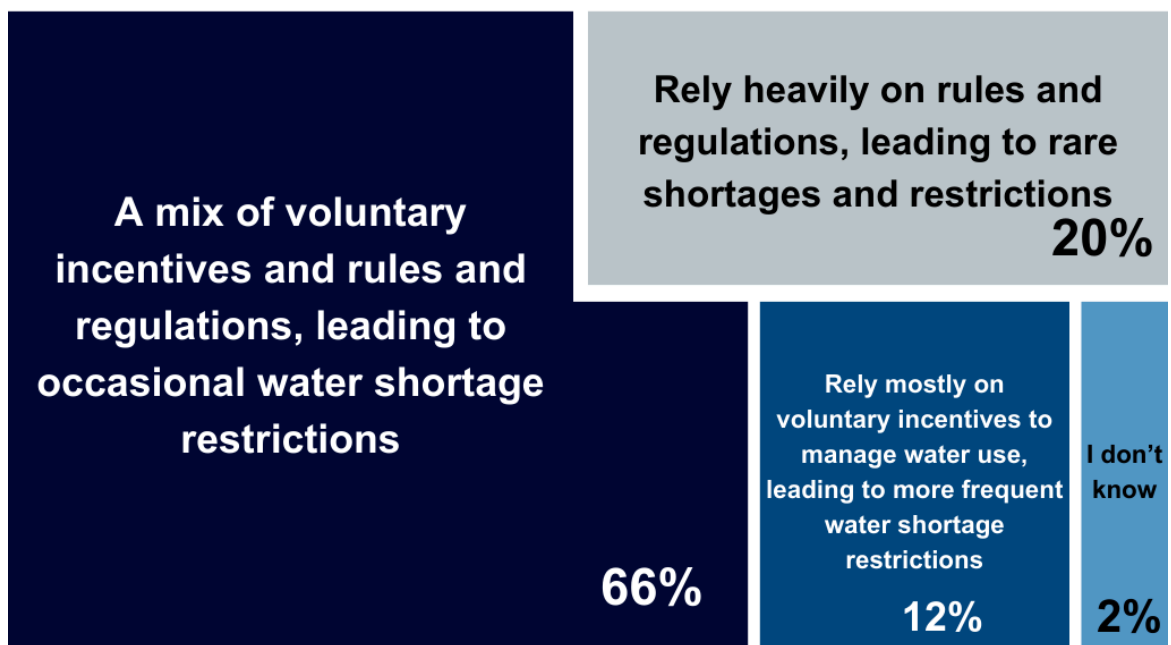
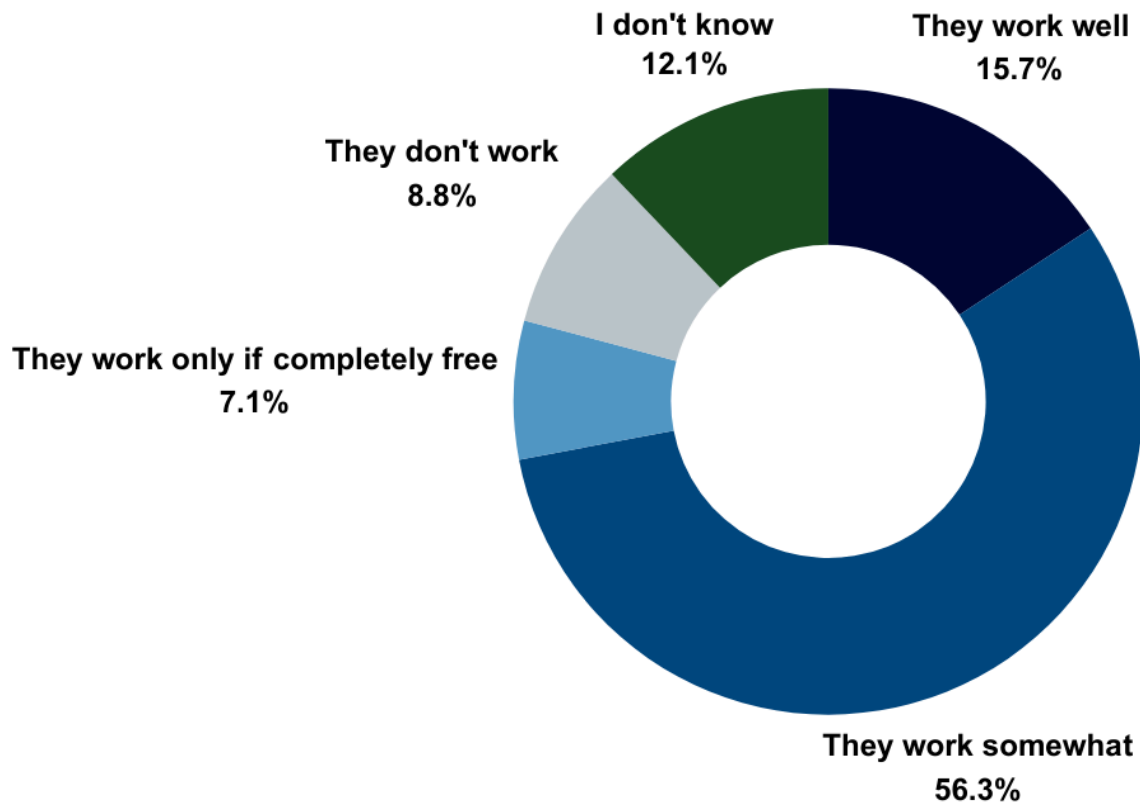


Figure 11. Respondents' beliefs on whether property owners should be required to make upgrades to improve indoor or outdoor water efficiency.



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

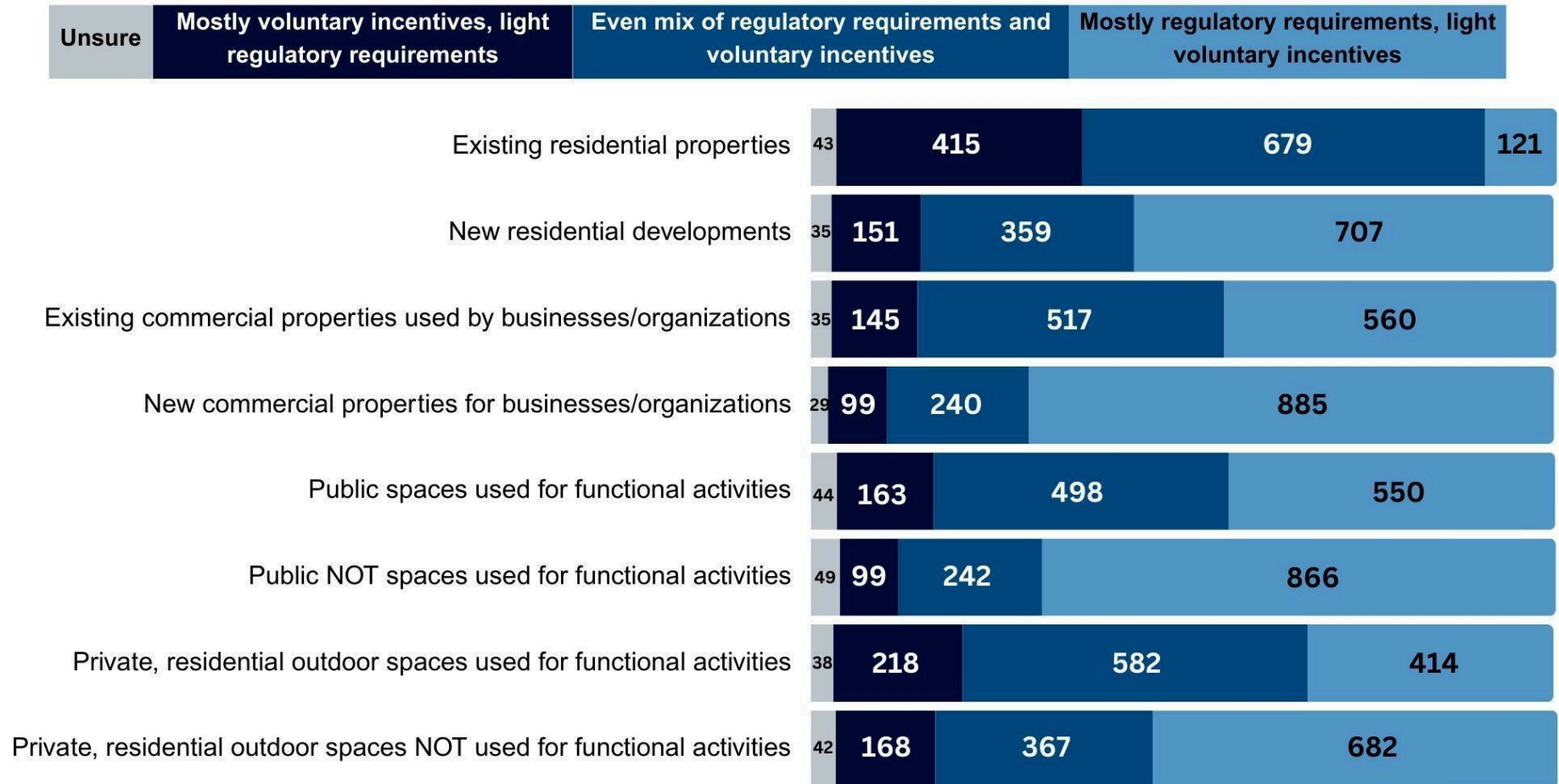


Figure 13. Respondents' beliefs on the right approach for the mentioned outdoor uses in Fort Collins.

## 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

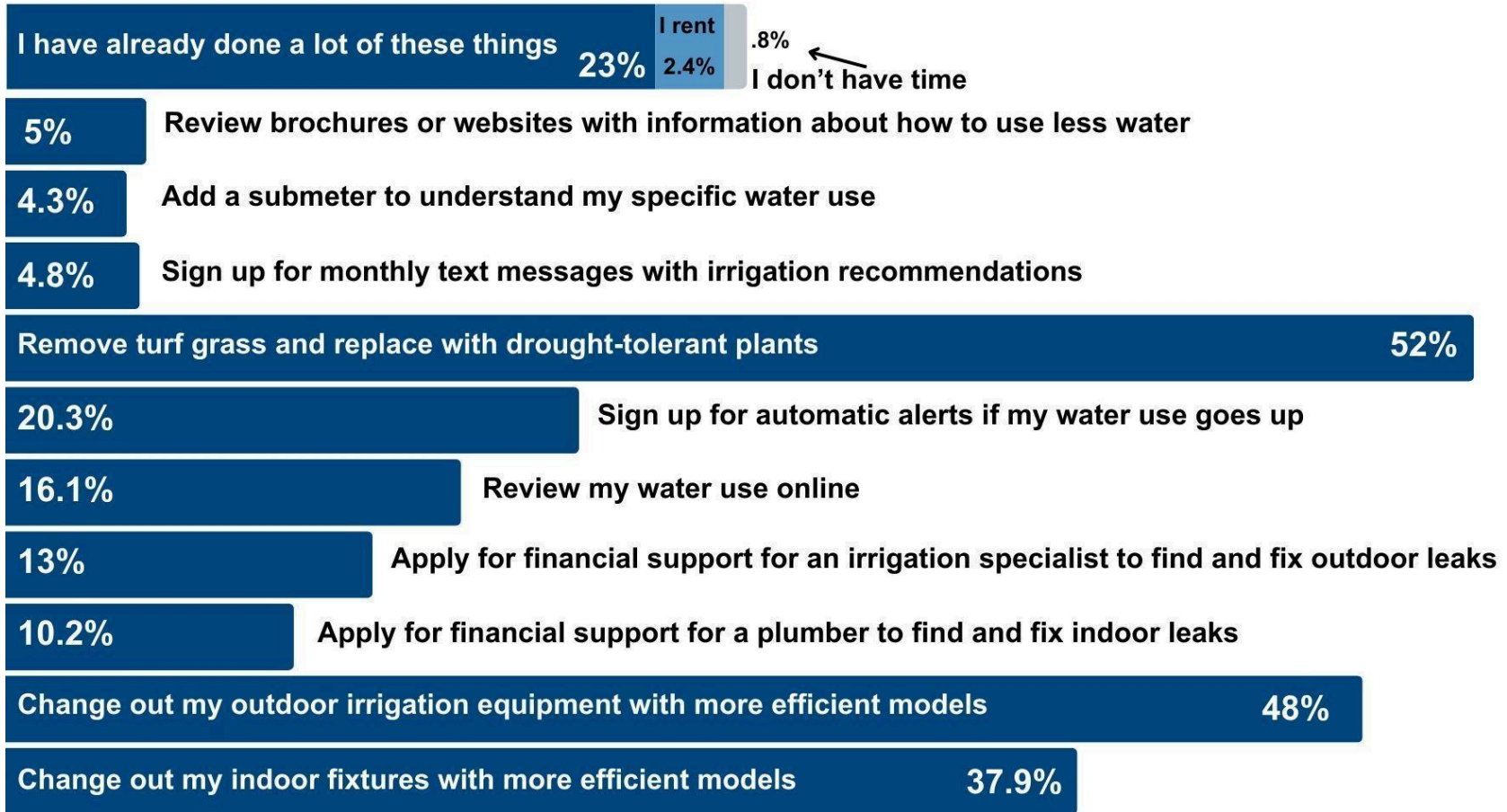


Figure 14. Programs that respondents would participate in if they were offered for free or with financial assistance.

## 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.

- **Simple Program Design:** A few responses also reported poor experiences with attempts to navigate existing programs or permitting processes. These respondents called for user-friendly, simple, and streamlined program, regulatory, and permit process designs.
- **Policy Tools:**
  - **Fines for Overuse:** A couple of responses advocated for excessive water use fines, commensurate to the offender’s income level.
  - **Building Codes and Development:** There were several suggestions for changing building codes and development policies to discourage or ban water-intensive landscaping and encourage xeriscaping in new developments. Additionally, limiting water permits for developers was proposed. There was a sense that lenient development policies have led to population growth that is exceeding respondents’ ideas of the City’s water availability, so cracking down on water use for newcomers and in new buildings was important.
- **Lead by Example:** Several respondents expressed a desire for the City to lead by example by implementing water-saving practices on its own properties. Some also observed the need for more transparency around the City’s water sources and conservation efforts.

## RECOMMENDATIONS

### APPROACH TO INCENTIVES, POLICIES, AND PROGRAMS

Respondents by and large favored a mix of voluntary and mandatory tools to reduce water use in all use cases (see Figure 10). This suggests that **respondents generally acknowledged that a comprehensive approach and combination of individual, institutional, and regulatory action are needed to “move the needle” and significantly reduce water consumption at the City level.** However, perhaps indicative of the survey respondent pool of wealthier, white homeowners, many felt they had already taken individual action and wanted to preserve their freedom to choose where to focus their own water conservation efforts. These

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.<br><br>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.   |
| <b>3</b> | <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> |
| <b>4</b> | 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>  | <b>TBD - Utilities input required</b>  |



|   |   |   |                                |
|---|---|---|--------------------------------|
|   | 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?
- a. I don’t think they work.
  - b. They work somewhat.
  - c. They work well.
  - d. They work only if completely free.
  - e. 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?
- a. Not willing.
  - b. Willing, only if there is a drought or shortage.
  - c. Slightly willing to do this every summer.
  - d. Very willing to do this every summer.
  - e. I don’t care – it wouldn’t impact me.
  - f. 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:

| <b>Approach</b>  | <b>Outdoor Uses</b>  |
|--|--|
| 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.<br>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.