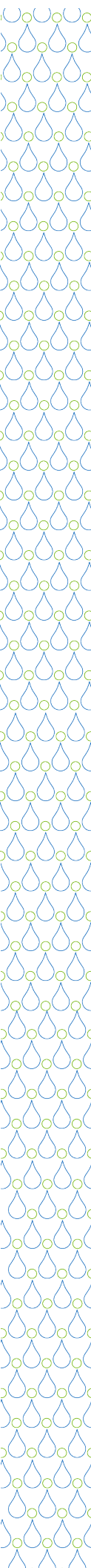




Guidance and Recommendations: Direct Toilet Installation Program and Tiered Toilet Rebate

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Background

Through its Project Accelerator, WaterNow Alliance (WaterNow) partnered with the City of Charlottesville (the City, Charlottesville) in reviewing and analyzing the current state of the City of Charlottesville's WaterSense Labeled Toilet Rebate Program (Toilet Rebate Program), determining improvement options for the program, and creating a deployment or implementation plan for these updated program elements.

The project identified several options for updates and changes to the City's existing Toilet Rebate Program, including:

- Adjustments to the rebate eligibility requirements, such as:
 - Introducing a tiered rebate structure,
 - Expanding rebate eligibility, and
 - Increasing the rebate amount;
- The creation of Direct Toilet Installation Program; and
- Specific outreach strategies targeting certain neighborhoods, demographic groups, or hard-to-reach communities within Charlottesville.

This memo highlights several next steps and more detailed considerations for the implementation of these programs, **a combination of a shift to a tiered rebate and the introduction of a Direct Toilet Installation Program**. It draws on research conducted through the project's earlier phases, as well as from research conducted in support of a [prior exploration of best practices](#) in direct installation programs conducted by WaterNow Alliance and Western Resource Advocates.

Developing a Direct Toilet Installation Program

Description

This approach would be focused on engaging low-income customers, who might benefit most from toilet repairs and replacements, but lack the time and upfront capital needed to participate in the City's Toilet Rebate Program. A Direct Toilet Installation Program would support income-qualifying customers by replacing toilets using 3.5 gpf or more with WaterSense certified toilets (using 1.28 gpf or less), and by repairing or replacing actively leaking toilets. The repair and replacement of actively leaking toilets would occur at the discretion of the on-site installer and/or plumber, and in consultation with the Charlottesville Water Conservation Program, to ensure low-cost options (e.g., the replacement of a toilet flapper) are considered before more extensive repairs. The program could support the repair or replacement of three toilets per household. In addition to supporting residential customers, the program could also partner with multifamily property owners to conduct a coordinated effort to replace toilets throughout a property and would focus on buildings that offer affordable housing, on an ad-hoc basis.

This program would be administered in partnership with a local partner or partners who may support the verification of customers' eligibility and income, schedule appointments and conduct initial site visits, and address any unexpected repair issues. Coordinating with local partners already working in the community and conducting toilet repair work in concert with other housing repairs improvements will streamline the process both for participants and for the City.

Customer Eligibility

The program would support income-qualifying residential customers in need of a toilet repair or replacement. (In the future, if the program expands, it could also consider engaging institutional and commercial customers (see Box 1)). A number of key considerations and next steps related to customer eligibility are described below.

- **Defining and verifying low-income customers:** It will be important to consider how to define and verify eligible residents who qualify for the program based on their income. It will likely be easiest for Charlottesville to align its eligibility requirements and verification process with those of any local project partners, and/or to expand the approach used to administer its other programs, such as CGEEP, the [Gas Assistance Program \(GAP\)](#), and the [Water Assistance Program \(WAP\) and Wastewater Assistance Program \(WWAP\)](#).
- **Considerations around supporting renters:** A Direct Installation Program could potentially support renters and owners in single-family residential housing. At the moment, both LEAP and AHIP support renters, albeit on a somewhat limited basis, depending, for instance, on whether specific funders allow support for renter-occupied housing requirements (for instance, U.S. Department of Housing and Urban Development (HUD) grants include specific definitions of low-income residents). It may be most efficient, particularly during the first years of the program, to align with their approach. For a more detailed discussion on the benefits and challenges of including renters in the program, please see Box 1.
- **Considerations around multi-family properties:** In addition to supporting customers residing in single-family residential housing, the program could pursue multifamily toilet rebates in affordable housing complexes or communities on an ad-hoc basis, for instance, by partnering directly with a nonprofit or public organization owning and operating affordable housing to implement toilet replacements at a larger scale. Focusing on affordable housing complexes could help ensure that savings are passed directly onto the customers. Ideally, project partners such as LEAP and AHIP could also facilitate these types of partnerships, as part of their broader home repair services.

Box 1: Considerations Around Engaging Renters

Opening program eligibility to renters can be especially challenging for utilities operating direct installation programs. Some direct installation programs are only open to homeowners, excluding low-income renters. In many cases, renters do not pay their water bills directly as they are not the account holders, and accounts are often held in the landlord's name and paid by them. Thus, tenants often pay for their water indirectly in various ways such as having these costs be included in their rent, or as a separate line item that they pay alongside their rent to their landlord. Particularly when renters are not the account holders, utilities may be reluctant to allow them to participate in income qualifying, direct installation programs. Additional reasons for keeping programs more narrowly focused on homeowners were:

- Challenges related to legal liability for the utility and their partners when the participant is not the homeowner.
- Perceptions from the community that the benefits of direct installation programs extend only to landlords, and not to income-qualified renters (particularly when the renter is not the utility account holder).
- The onerous process for utilities to verify rental participants for income-qualifying programs.
- While limiting the program to homeowners simplifies administration, these low-income renters would otherwise be income-qualified for the program and are unable to realize the benefits of reduced water bills and water conservation likely resultant from participating in these programs. Four communities with toilet rebate programs available to renters include: [Santa Fe, NM](#); [Greeley, CO](#); [Scottsdale, AZ](#); and [Portland, OR](#), many of which have created additional application steps involved in participating in each program as a renter, typically through required homeowner consent letters. Allowing flexibility in digital or hardcopy signatures on these letters can be helpful, as landlords do not always live close by. Other programs have found it helpful to create short postcards or fliers that include program information or talking points that renters can share directly with landlords to help facilitate this process.

Box 2: Expanding into Institutional and Commercial Customers

While this memo and program focuses on engaging residential customers, some communities have also opened their direct installation program to other sectors. For instance, the City of Pasadena, California, also offers a Water & Energy Direct Install Program ([WeDIP](#)) that provides select commercial customers in disadvantaged communities with free assessments and installation of up to \$7,500 in energy- and water-saving equipment, such as toilets, faucet aerators, showerheads, and clothes washers.¹ [Aurora Water](#) includes the institutional sector in its program, targeting nonprofit organizations, such as churches, that maintain buildings/facilities. This could be another option to consider on an ad-hoc basis, particularly for facilities that provide community services, like faith-based organizations, community centers, libraries, or child care facilities, in neighborhoods with high concentrations of low-income residents.

Toilet Eligibility

A Direct Toilet Installation Program would support income-qualifying customers by replacing toilets of 3.5 gpf or higher with WaterSense certified toilets (of 1.28 gpf or lower), and by repairing or replacing actively leaking toilets. The repair and replacement of actively leaking toilets would occur at the discretion of the on-site installer and/or plumber, and in consultation with the Charlottesville Water Conservation Program, to ensure low-cost options (e.g., the replacement of a toilet flapper) are considered before more extensive repairs. The program could support the repair or replacement of three toilets per household.

Several insights about toilet eligibility include:

- **The importance of having several replacement toilet options:** It will be helpful for the toilet installers to have toilet equipment available in various models and sizes, to fit different site specifications. For instance, mobile homes and manufactured housing often have unique plumbing infrastructure and fixtures, and some households may require ADA-compliant toilets with elongated seats. The City may wish to work with plumbers and with its project partners to compile a list of equipment recommendations based on these potential needs. In particular, it may be helpful to work closely with plumbers who participate in AHIP's program, to determine which models are most widely affective in Charlottesville. (For insights into toilet selections and installation considerations found in other communities, see Box 3).
- **Consider any maintenance suggestions:** It may be helpful to flag any maintenance considerations for participants, particularly if the site or toilet has any unique needs to consider.

Box 3: Toilet Selection and Installation

Interviews with other programs suggested that is ideal to have an inventory of a couple types of toilets to fit varying site specifications and customer preferences. More details on their experiences are summarized below:

- Greeley, Colorado has found that while 0.8 gpf Niagara Stealth toilets are generally effective and recommended, these appliances can face challenges in areas of town that have older sewer lines and locations in cul-de-sacs. The City has also:
 - Excluded wall mounted toilets from being eligible.
 - Found that in older homes that might have clay pipes, it's a best practice to put a root treatment down before installing the new toilets.
 - Found that plumbing installed prior to the 1940's is problematic because collapsing clay pipes were used.
- Northern Water in Colorado uses ADA compliant toilet with an elongated seat and MaP score¹ of 1000 (this score means that the fixture is highly recommended due to best performance potential).
- Seattle Public Utilities' direct installation program typically purchases American Standard HETs of 0.8 gpf, but will use other toilets and accommodate customer requests for more expensive toilets when they can.
-

Conversations with existing programs also flagged several general suggestions and best practices:

- For multi-family residential housing, and particularly for high occupancy buildings, if a property has known issues with wastewater backups there may be a collapsing wastewater line or belly culprit which should be part of audit questions.
- Quality toilet seats are important to residents. One community found that residents did not like the cheaper toilet seats that come with the Niagara toilets. Older toilet seat covers may not fit new toilets, and it can be helpful to make customers aware of this.
- One community suggested ordering multiple diameter fill hoses, in lengths from 6-24 inches depending on the run lengths, and to always travel with buckets of different sizes.
- Toilet bolts vary in length, so another suggestion was for installers or plumbers to always carry longer lengths in addition to standard sizes.
- Invest in high quality wax rings that go with flanges; quality wax rings ensure proper fittings and seal.

Outreach Strategies and Participant Recruitment

Having an established pool of potential participants is key to program uptake; partnering with local organizations, such as LEAP or AHIP, that already has a process for engaging with community members will be enormously helpful to the program’s success. In future years, additional steps to identify participants might include targeted outreach to participants in other assistance programs, and, potentially, pre-qualification of these participants (e.g., reducing or eliminating the need for additional paperwork for participants who have already applied and verified their income through a different program). Figure 1 below outlines starting points for additional outreach partners, and the *Customer Outreach and Communication Strategies* section outlines additional strategies and suggestions.

Potential Partners Checklist

<p>ENERGY EFFICIENCY</p> <hr/> <ul style="list-style-type: none"> <input type="checkbox"/> Local utilities <input type="checkbox"/> Local energy assistance programs <input type="checkbox"/> Low-income home energy assistance <input type="checkbox"/> State energy offices <input type="checkbox"/> Weatherization programs 	<p>EQUITY AND INCLUSION</p> <hr/> <ul style="list-style-type: none"> <input type="checkbox"/> African American Alliance for Homeownership <input type="checkbox"/> Committee for Hispanic Families and Children <input type="checkbox"/> UnidosUS <input type="checkbox"/> Immigration and refugee service agencies
<p>HOME OWNERSHIP AND IMPROVEMENT</p> <hr/> <ul style="list-style-type: none"> <input type="checkbox"/> Habitat for Humanity <input type="checkbox"/> Rebuilding Together <input type="checkbox"/> Operation Homefront <input type="checkbox"/> Homes for Our Troops <input type="checkbox"/> Volunteers for America <input type="checkbox"/> Christmas in April 	<p>OTHER ORGANIZATIONS</p> <hr/> <ul style="list-style-type: none"> <input type="checkbox"/> Churches and faith-based organizations <input type="checkbox"/> Senior service agencies <input type="checkbox"/> Universities <input type="checkbox"/> Job corps/training programs <input type="checkbox"/> Service-learning organizations <input type="checkbox"/> Boys and Girls Clubs
<p>HOUSING/ASSISTANCE</p> <hr/> <ul style="list-style-type: none"> <input type="checkbox"/> Housing authorities <input type="checkbox"/> Food banks <input type="checkbox"/> Area Agency on Aging <input type="checkbox"/> Meals on Wheels 	

Figure 1. This checklist, from EPA’s report, [Assistance that Saves: How WaterSense Partners Incorporate Water Efficiency into Affordability Programs](#), outlines potential partners who may also help identify or share program information.

Suggested strategies around **outreach messaging** from a survey of toilet rebate and direct installation programs included:

- Focus on the benefits for the participant – *what is in it for them?*

- Clients can save money on water (toilets use about ¼ of indoor water use), heating less water and thus saving on energy and natural gas bills, receive free fixtures.
- Many participants were interested in receiving a free, upgraded fixture for their home.
- It's helpful for engaging outreach partners to make a case for collaborating with the City and program.
- For older homeowners in particular, it can be helpful to market the toilets as being ADA compliant (these have elongated seats).
- Radiating inclusivity and kindness helps to build trust and relationships.
- Employ humor: Pair water use efficiency programs with general customer education content.
- Consider the seasonality of outreach: one community found that winter was a good time to focus on indoor installations because residents could pretty immediately see the impacts from participating in their water bills.

Customer Experience

Suggestions and best practices around ensuring the customer experience is strong include:

- Make the **application form** simple and easy to complete, without requesting extraneous information (e.g., don't collect SSNs), especially for those prequalified through other programs.
- Provide detailed **FAQ and high-efficiency toilet/fixture fact sheets** (e.g., on website and as printed collateral when performing installations).
 - No details are too mundane or silly to include and the small things can really be important, e.g., include that the toilet will flush and function properly, toilet height options, etc.
 - Restrooms are an intimate space and people worry about their comfort, effectiveness of the fixtures, etc.
- It's helpful if the customer service and installing team can communicate to residents their own **positive experiences with the high-efficiency toilets** – that it works for them and will work for the client.
- It is important when visiting homes to give **space for participants to exercise autonomy and choice** and to ensure that participants feel there is an open dialogue and that they have agency throughout the program and during home visits. For instance, this can take the form of communicating that participating in the program is optional, and if there are fixture alternatives, such as selecting a particular showerhead, the choice should be given to participants to make. Participants may not know they have choices or that they can advocate for themselves.
- Once households are targeted for participation, it's important when engaging with immigrant and refugee populations to be intentional and aware of observing certain cultural practices (e.g., importance of removing shoes in home as sign of respect).

Toilet Installation Process

- **Preliminary site audits:** It's important to conduct an initial audit or first walk-through, before any repairs or installations take place.
 - Requiring preliminary audits prior to direct installations (see Box 4) can help to identify infeasible installations, sites that would need additional repairs before a retrofit could be completed and prepare the installation team for what to expect at each site. The Resource Central program found that prior to requiring preliminary indoor water use audits, toilet installation could not be performed 30% - 40% of the time.
 - Ideally, nonstandard installation conditions observable during the initial audit need not automatically disqualify potential participants; program operators can confirm there is budget to proceed with addressing the broader repair needs of potentially rotten subfloor, plumbing issues, broken flange, etc.
 - Some programs use this initial audit to also install the "easy wins," like high-efficiency showerheads and aerators (thought this can also be done in conjunction with toilet installations instead of during the audit).
 - Programs recommended establish a clear list of protocols for technicians to help avoid removing toilets that shouldn't be removed (e.g., where a lower-cost fix such as a replacement flapper could address the issue) and for flagging broader repair needs that should be considered before proceeding.
- **Nonstandard Installations:** Other communities have found that nonstandard toilet installations occur regularly in both owner-occupied homes and rental units and a plumber should be on call, if not performing the installs themselves. It's important to note that plumbers' emergency rates are higher.
 - It may be helpful to conduct informational interviews with local plumbers to glean other potential issues and best prepare for program implementation.
 - It's suggested to partner with a credible plumber familiar with common issues in the area, and ideally one that has an overlapping mission to support diverse demographics.

Box 4: Suggested Audit Components

A survey of direct installation programs conducted by WaterNow in 2022 outlined the following elements that technicians should check for during an initial site audit:

- Soundness of subfloor and structure (these may likely be poor, unless the house is newer)
- Flooring height (toilet may sit on small platform, etc.)
- Condition of toilet flange
 - If the toilet wiggles, the flange is likely broken.
 - Resource Central’s program waivers detailed that it was the responsibility of the participant to have a certified plumber fix flanges, but this needed to be stressed again to some participants when they were on site and installations could not take place as planned.
- Condition of toilet bolts
 - Bolts may be too corroded to remove.
 - Options to remove bolts may break the old toilet and may not be effective at removing the bolts.
- Measurements for the toilet
 - Teach tech auditors to measure for the toilet rough in correctly to avoid day of installation issues, and to select correctly sized toilet with button/lever in optimal location
 - Don’t rely on measurements from participants – they are often wrong (this was an issue prior to requiring indoor audits)
- Shelving or framing immediately above/surrounding the toilet that will require a certain position for the flushing button/lever
- Condition of water supply line
- Particularly for high occupancy buildings, does the property have known issues with wastewater backups? Was the plumbing installed prior to 1940? Is there a collapsing wastewater line or belly?
 - In one City, for example, plumbing installed prior to the 1940’s was problematic because collapsing clay pipes were used.
- Gallons per flush of the existing toilet (to ensure it meets program eligibility requirements)
- Is the toilet tiled into the floor or wall? Will moving the toilet break any tiling/flooring/wall materials?
- If there any concerns about plumbing and wastewater backups, run a scope with video down the plumbing (can cost as little as \$100).
- Do not proceed with any installations where there are wastewater line issues observed.

Box 5: Mobile and Manufactured Homes

Mobile and manufactured homes can be good partners to work with because they generally have high water use and are not individually metered, thus lack pricing signals. Property landlords often manage multiple sites and want to do installations at a large scale for all of their sites. However, for mobile homes, plumbing infrastructure and fixtures can make retrofits difficult or impossible. Some best practices for considering toilet repairs and replacements at these sites include:

- Prior to conducting audits and installations, it's a good practice confirm type of housing stock (e.g., is this a mobile home?).
- In situ plumbing materials may not be compatible with retrofits regardless of the age of the mobile home, for instance when:
 - Fill valves use plastic piping so metal equipment that technicians use cannot interface.
 - Sub floor materials are not strong enough or appropriate for the HET installation.
- Fixtures may need to be tailored to manufactured homes and may be different than standard fixtures.

Liability Issues

Liability issues are a key consideration in conducting any work in customer homes, both in terms of confirming liability consideration with customers and in clarifying whether the City and/or its implementing partners bear any liability for issues that may occur during the toilet repair and replacement process. A past survey of direct installation programs found that while utilities (and their implementation partners, if applicable) take care to remove their legal liability when operating direct installation programs, there have been rare instances when customers may be dissatisfied with the services rendered, particularly when more work may need to be completed in their homes to meet their satisfaction. For example, one city shared that one situation with a participant turned into a public relations issue which they resolved by paying to have additional work done on the ceiling and drywall in the customer's home. Their implementation partner, a local youth corps, has subsequently handled any customer service issues. Mandatory completion of liability waiver form by the homeowner prior to participation can mitigate this risk (any implementation partners conducting home repairs likely already have a form and system in place for this).

Partnership Structures

Working with implementation partners are confirmed as a best practice and can add extensive expertise and capacity to execute installations, administer programs, and perform outreach; in some instances, these programs also provide job training for youth, and young or underemployed adults, among other benefits. These organizations also bring a strong depth of relationships and solid reputations in their respective communities. Key considerations around these partnerships include:

- Including clear deliverables, such as installation goals, or marketing and promotional goals, in the agreement.
- A clear outline of responsibility for various elements of the program (from participant identification, outreach, preliminary site visits, implementation, and follow-up) is helpful to ensuring a smooth program roll-out. It may be helpful to establish regular meetings across all project partners to track progress and adjust the approach to implementation as needed.
- It's important to clearly determine how liability will be handled across these organizations.

Program Costs and Budget

Several key additional suggestions and considerations around the programs budget and costs are summarized below:

- **Plan for a contingency budget:** Maintain a 10-15% contingency budget for nonstandard installs/emergency repairs, accidental damage, and leaks that will occur. Common plumbing issues in toilet replacement often include broken flanges, rotten subfloors, leaks, corroded toilet bolts, etc. One city also recommended putting down root treatment prior to installing toilets. (In some cases, it may be possible to identify these issues during the initial inspection, and to confirm whether the program has budget available to address them and proceed with the toilet repair or replacement). It's vital to avoid leaving clients without a toilet, as income qualified participants are least likely to have the resources to fix their own toilets if new toilet cannot be installed.
- **Account for marketing and outreach costs:** Since many low-income customers can be more challenging to reach, the program's internal marketing capacity, outreach network, and communication channels are important to engaging participants. Specific suggestions included:
 - Create a marketing toolkit for the program and share collateral with outreach partners
 - Allocated dedicated staff with time to perform the marketing consistently, e.g., monitoring bill inserts, etc.
- **Consider discounts and storage:** If there is space available to store toilets, it may be worth exploring opportunities to receive a discount for supplies based on volume.

Implementing a Tiered Rebate Structure

Description

A tiered rebate option seeks to align the greatest financial incentives with the greatest water savings, while still expanding eligibility for the program. This tiered rebate option would build on Charlottesville's existing Toilet Rebate Program, and offer:

- A higher (e.g., \$150) rebate for the replacement of existing toilets that use 3.5 gpf or more with WaterSense certified toilets (using 1.28 gpf or less).

- A lower (e.g., \$100) rebate for the replacement of existing toilets that use 1.6 to 3.4 gpf with WaterSense certified toilets (using 1.28 gpf or less).

The application process could proceed much as it currently runs, with some potential updates to the process of confirming program eligibility (e.g., potentially removing the need to verify a property’s age, if this eligibility requirement were to be dropped).

The program could continue to support the repair or replacement of three toilets per household. Any updates to the program could also be an opportunity to update the purchase date for the replacement toilet. The current program guidelines note that a new toilet must be purchased after June 30, 2002; it may be helpful to set an updated deadline (e.g., the toilet must be purchased after the date the new policy or program takes effect), to ensure the program is focused on supporting new toilet replacements, rather than reimbursing past replacements.

Rebate Structure

Cities including Big Bear, California; Hays, Kansas; California’s Metropolitan Water District and Santa Fe, New Mexico have used this tiered rebate approach, offering 2-3 tiers or rebates, ranging from \$50-\$250 for a rebate, depending on the volume of water used by the new and/or replacement appliance (see Table 2 below).

Organization	Tiered Rebate Structure
California’s Metropolitan Water District¹	\$250: Replacement of toilets 3.5 gpf or higher \$125: Replacement of 1.6 to 3.4 gpf toilets Rebates apply to multifamily properties.
Santa Fe, NM²	\$57: Purchase of a 1.28 gpf toilet \$128: Purchase of a 0.88 gpf toilet Rebates apply to single family residential customers.
Town of Big Bear, California³	\$50: Purchase of toilet using 1.6 gpf or less \$100: Purchase of toilet using 1.28 gpf or less
City of Hays, Kansas⁴	\$150 (or purchase price): Purchase of 0.8 gpf toilets \$100: Purchase of 1.0 gpf toilets \$50: Purchase of 1.1-1.28 gpf toilets

Table 2. Summary of tiered rebate structure details across four example programs.

¹ See: <https://socalwatersmart.com/en/commercial/rebates/available-rebates/pre1994-multi-family-property-toilet-replacement-program/>.

² See: <https://savewatersantafe.com/indoor-rebates/>.

³ See: <https://www.bbldwp.com/86/Toilet-Rebate-Program>

⁴ See: <https://ks-hays.civicplus.com/572/High-Efficiency-Toilet-Rebate>

The Phase 5 memo outlines a budget that offers rebates of up to \$100 and \$150. These amounts reflect the fact that many toilets, and particularly models with the lowest gpf, exceed \$100, making a case that a higher rebate amount might increase participation in the program. The City could exploring adjust these amounts and the criteria for these thresholds based on their experience or on common trends in replacement in the current program. The City could also explore offering a tiered rebate based solely on the toilet being purchased (e.g., offering a \$150 rebate for the purchase of a 0.8 gpf toilet and a \$100 rebate for the purchase of a toilet using 1.26 gpf or less).

Customer Eligibility

The eligibility requirements for customers could either remain the same, or expand to include:

- Properties built after 1994. This could encompass all properties built after 1994, or use 2000 as a cutoff date (since most toilets have a life-span of 20-25 years, homes built before or after 2000 may be most likely to benefit from being updated). Expanding to properties built before 2000 would increase the number of potentially eligible residential properties that have not yet participated in the rebate from 5,587 to 5,910, while removing the date-built requirement entirely would increase that number to 8,151. These additional properties would likely only be eligible if 1.6 gpf toilets were made eligible to be rebated.
- Properties that are past participants in the program (e.g., a property might become eligible if it has been 20-25 years, the typical life span on a toilet, after the original rebate occurred).

Toilet Eligibility

This approach would expand the current Toilet Rebate Program's eligibility criteria, by supporting the replacement of toilets that use more that 1.6 gpf but less than 3.5 gpf (at a lower rate of support than toilets using 3.5 gpf or more).

Communication and Outreach Strategies

While this tiered rebate approach could largely build on the City's existing outreach practices, some key elements to consider include:

- Updates to the program would entail updating written and online outreach content, application forms, and other materials associated with the program.
- Ideally, outreach about the program's expanded eligibility and rebate amounts could target newly eligible customers.

The *Customer Outreach and Communication Strategies* section outlines some additional suggestions and potential approaches around communication and outreach to customers. Additionally, *Appendix B* outlines communication examples from other tiered rebate programs,

including content focused specifically on communicating how to check a new or existing toilet for its flush volume(s).

Program Tracking Metrics

Tracking program data and metrics will be critical to evaluating program success and establishing realistic programmatic goals. Metrics are also essential in applying for new funding. Several quantitative and qualitative metrics to consider are listed below.

Quantitative Metrics:

- Track water savings resulting from toilet replacement, leak repair, and/or water-saving fixtures.
 - Direct installations and toilet rebates provide immediate and automatic water savings without requiring behavior change and can be estimated according to water savings estimates from WaterSense.
 - Estimates of savings from water-saving fixtures installed as part of the Direct Toilet Installation Program could also be conducted using water savings estimates from WaterSense.
 - If there is sufficient staff time for it, the City may also want to conduct a deeper dive on specific customer's water usage before and after installation of water saving fixtures, including toilets, and on any leak repairs, to see how it compares with the WaterSense data. The water savings from leaks may be especially helpful to track.
- Track how many toilets had leaks prior to retrofits taking place.
- Longer term, the City may consider how to tie program benefits into complementary goals, such as waste diversion, energy savings, and avoided greenhouse gas emissions. This could take the form of metrics on:
 - Energy savings due to treating and supplying less water.
 - The toilets recycled and diverted from the waste stream. Other programs have found that recycling toilets can ultimately result in cost reductions by helping to avoid illegal dumping and unsightliness, enforcement of violations, and mitigate toilets ending up in the waste stream.
 - The Alliance for Water Efficiency [Water Conservation Tracking Tool](#) could be a helpful resource in calculating some of these co-benefits.
- Track demographics of program participants, such as preferred language, household size, and household income.
 - This work could be coordinated to align with any information gathered by the program's community partners and as part of the application process.
- WaterNow's [data tracking template](#) for conservation and outreach metrics provides one example and reference point for customizing metrics.

Qualitative Metrics:

- It may also be helpful to hear directly from customers, through short surveys or end-of-project conversations.
- Learning more about the customer experience could also aid outreach and communication efforts. Sharing testimonials and success stories, along with information, can help play a role in enabling customers to know what to expect, visualizing themselves as participants, and encouraging questions and participation.

These qualitative insights and resources might be especially helpful for the Direct Toilet Installation Program, which may be less familiar to participants and require higher levels of trust from customers, to agree to invite the implementation partners into their homes.

Box 6: Participation Numbers and Metrics

Several examples of metrics from other communities are summarized below:

- **Evans, CO:** In its first year, Evans conducted 48 indoor water audits, replaced 33 toilets, installed 62 faucet aerators, replaced 39 shower heads, and installed 212 LED light bulbs and 15 smoke / carbon monoxide detectors in their pilot year of the program. In the future, Evans would like to expand its indoor audits and high efficiency toilet installation program to other Evans community members, including multi-family households, renters, and commercial, industrial, and institutional entities. The City expects that going forward the program will replace more than 60 high water use appliances and fixtures per year with efficient ones, and provide community members with **150 home water audit kits per year** – steps that will save around **90,000 gallons of water annually**.
- **Aurora, CO:** Since 2012 (and through 2022), more than **340 residential and commercial customers** have participated in the program, with over 500 toilets, 150 showerheads and 300 faucet aerators having been installed in low-income households.
- **Westminster, CO:** Water savings at a Housing Authority property in Westminster amounted to **300,000 gallons of water per month** following upgrades in 72 units—a **48 percent decrease** in water use that translated to **an annual savings of \$65,000** after the investment of \$30,000 in the direct installation of efficient toilets. The City is hoping to explore ways to make the business case for toilet replacement to customers and large water users who have the resources to replace toilets themselves.

Appendix A: Additional Resources and Examples – Direct Toilet Installation Programs

Direct Installation Outreach and Communications Examples and Resources

1. [Direct Install Program Research & Outreach Collateral](#) from Aurora Water, City of Westminster, Fort Collins Utilities, Tucson Water, and Seattle Public Utilities
2. Evans, CO: [Direct Installation Recruitment Postcard](#)
3. Fort Collins, CO: Bill insert brochure [“Utilities Affordability Resource Guide”](#)
4. [Resource Central’s informational webpage: “Indoor Water Use Consultation for Your Home”](#)
5. [Resource Central’s](#) informational packet for HOA/CII customers [\(What We Do, What You’ll Get, etc.\)](#)

Direct Installation Program Examples and Resources

In this project’s review of approximately 40 toilet rebate programs, twenty percent (8) of the programs offered direct install services. These direct install programs included:

- Pasadena Water and Power (PWP): [“Under One Roof”](#) & [WeDIP](#)
- Aurora Water: [Low-Income Water Efficiency Programs \(LIWEP\)](#); see also the WaterNow Alliance Case Study on [Aurora Water’s Water Conservation in Low-Income Households](#)
- Seattle Public Utilities (SPU): [Low Income Toilet Offer](#) & [Toilet Rebate Program](#)
- Tucson Water: [Free Toilet Replacement for Low-Income Homeowners](#) & [High-Efficiency Toilet \(HET\) Rebate, & Water Conservation Kits](#)
- Madison Water Utility (MWU): [Home Water Conservation Program](#) & [HET Rebate Program](#)
- Dallas, TX: [New Throne for Your Home Residential Program](#)
- San Francisco, CA: [Free Toilet Program or Plumbing Fixture Replacement Program](#)
- Westminster, CO: [Toilet Rebate Program](#); see also the WaterNow Alliance Summary of the [City of Westminster, CO’s Affordable Housing Water Fixture Upgrades](#)

Additional resources and examples of direct installation programs can be found in the resources below:

- EPA’s [Assistance that Saves: How WaterSense Partners Incorporate Water Efficiency into Affordability Programs](#)
- WaterNow Alliance’s [Summary of Direct Installations of Localized Water Infrastructure: A How-to Guide for Local Water Leaders](#)
- WaterNow Alliance’s [Data Tracking Template for Program Metrics](#)

Appendix B: Additional Resources and Examples – Tiered Rebate Program

Tiered Rebate Program Materials

1. [Santa Fe Toilet Rebate Application Form](#)
2. [City of Hays High Efficiency Toilet Rebate Form](#)
3. [Town of Big Bear Toilet Rebate Application Process and Instructions](#)

Tiered Rebate Communication Materials

1. King and Snohomish County's Saving Water Partnership's instructional webpage and short video, walking a customer through determining [How Much Water Does Your Toilet Use?](#)
2. Marin Municipal Water District's short guide on [How to Check Your Toilet's Flush Volume](#)
3. EPA's [WaterSense Labeled Toilet Factsheet](#)
4. New York City Department of Environmental Protection's [Repair Your Leaking Toilets: Save Water and Stop Flushing Away Your Water Bill](#)