



# *Ensuring One Water Works for All:* *Opportunities for Realizing Water Reuse in Affordable Housing* **OPPORTUNITIES AND RECOMMENDATIONS FOR AUSTIN**

Despite existing barriers to both affordable housing and onsite water reuse, the plethora of funding opportunities and room to strengthen partnerships means there is a viable pathway to more water-efficient affordable housing.

The following opportunities are informed from case studies, interviews with affordable housing advocates and experts, and existing literature. Advocacy and

action at all scales is necessary to removing regulatory, financial, and education barriers and establishing foundational change. Embedding equity and justice at the onset of this work sets the pace to seeing an equitable implementation of onsite reuse systems in affordable housing development. Surpassing these challenges will take efficient incentives, creative funding, community-based work, strong partnerships, sustainability leaders, and rethinking cost and benefits.



**National Wildlife Federation**  
**Texas Coast and Water Program**

*Image: The Learning Center at Foundation Communities' Lakeline Station in North Austin meets 95 percent of its water needs with harvested rainwater and HVAC condensate.*



# Financing Opportunities

## PACE

Property Assessed Clean Energy (PACE) financing is [a proven](#) long-term financing mechanism that can cover 100% of energy and water efficiency project costs. PACE eligible projects must demonstrate that energy and water savings gained from the project exceed the project’s cost. Property owners are not tied to repayment since the assessment is instead tied to the property. PACE is an

opportunity to remove the hurdles of upfront capital costs of onsite reuse for affordable housing.

A [report](#) by the National Wildlife Federation and Texas Water Trade found that high-rise and mixed-use development with various reuse strategies can be eligible for PACE financing. The

report found that utility incentives

or added energy efficiency measures can help developments with onsite reuse meet PACE eligibility. Another [report](#) found PACE to be a feasible mechanism for financing affordable housing in Texas.

For developers PACE is therefore a viable option to finance both green affordable housing and onsite reuse systems. Currently PACE is only applicable for redevelopment projects, making it an ideal option for revitalizing affordable housing and implementing One Water strategies.

- Onsite water reuse projects should be coupled with energy efficiency strategies to ensure PACE eligibility is met.
- Legislators should amend the Texas PACE ACT to make greenfield developments eligible for financing.

## HUD

The Department of Housing and Urban Development (HUD) provides a variety of grant and assistance programs that can facilitate the integration of water reuse into affordable housing. Community Development Block Grants for Disaster Recovery, for example, are an opportunity to rebuild or rehabilitate affordable housing with resilient water infrastructure. The CDBG-DR grants are aimed at rebuilding and recovery efforts for areas affected by a presidentially-declared disaster. HUD outlines any requirements tied to the grants in the Federal Register. In Texas, the General Land Office receives the allocation for distribution, detailed through the State Action Plan. CDBG allocations have been directed to affordable housing reconstruction, rehabilitation, and new construction.

Promoting the funding of onsite water reuse through CDBG ensures that climate-resilient and forward-looking infrastructure is invested in areas continually struck by disasters. In Puerto Rico, CDBG-DR is being leveraged to fund a [Community Energy and Water Resilience Installations Program](#), which includes funding onsite reuse infrastructure.

- HUD should require federally subsidized housing projects to integrate efficient and resilient water infrastructure, such as onsite water reuse systems. HUD can require CDBG-DR funded projects to address water-related climate impacts to push projects to consider future water cost, demand, and supply.
- The Texas General Land Office should promote housing and infrastructure projects that include One Water elements such as onsite water reuse. Prioritization can integrate through Actions Plans, scoring systems, Methods of Distribution, and outreach materials.
- CDBG should be permanently authorized to speed up the recovery process.



## FEMA

The Building Resilient Infrastructure and Communities (BRIC) program supports hazard mitigation projects and planning at the state and local levels. These funds support proactive pre-disaster mitigation support for communities to build innovative projects that reduce risk and increase capacity.

Programs and projects that incorporate onsite water reuse strategies can qualify as BRIC-eligible mitigation efforts that reduce flooding risk. Affordable housing with One Water strategies (including onsite reuse) aligns with FEMA’s interests in protecting community lifelines (water, shelter, and energy), expanding nature-based solutions, promoting equity, and realizing multiple benefits.

Apart from financing projects, BRIC is also applicable for capacity-building activities and management costs. The following recommendations ensure state and local agencies are poised to fully take advantage of BRIC funding.

- Collaboration between housing, water, and hazard mitigation planning agencies is needed to identify where affordable housing needs and risks can be integrated into local and state Hazard Mitigation Plans (HMP). BRIC prioritizes those projects that align with HMP.
- State and local governments should adopt the latest published editions of building codes (2015, 2018, or 2021 version of International Building Code and International Residential Code). Adopting these codes ensures maximum points and consideration is given to applications.



## Anti-Displacement Strategies

## COMMUNITY-BASED WORK

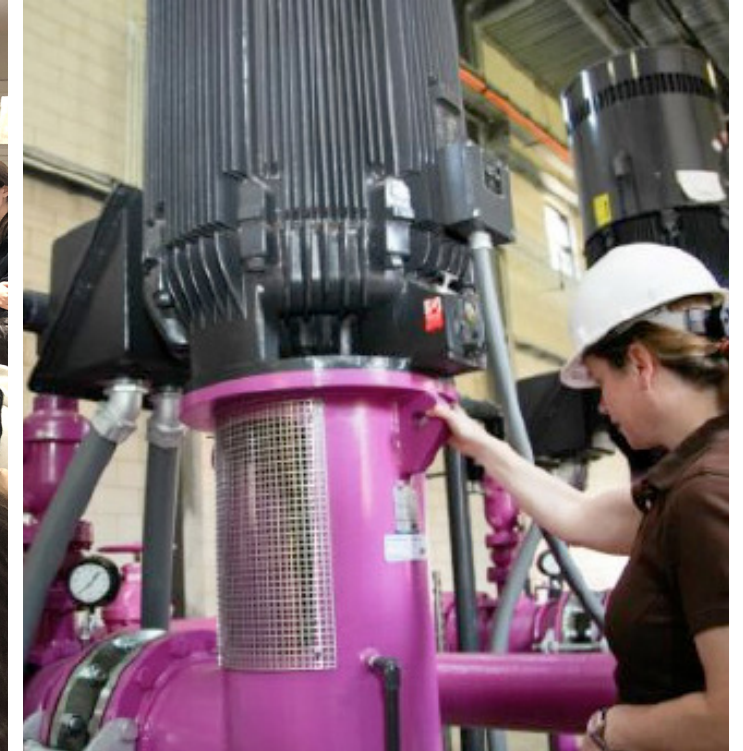
Just outcomes come hinge on community-based work. As exemplified in the Paseo Verde case, partnering with community-based organizations is key to instilling local values into projects. Involving community organizations can produce additional support services for residents. At a larger scale, they can also support anti-displacement activities and promote community-wide wellbeing and sustainability. Supportive services like environmental and legal education equip communities with broader needs and resources which may be overlooked. Community organizations hold invaluable information about housing, water, and non-water issues through their lived experiences. Coupling water resiliency with social justice efforts is key to alleviating displacement forces and center equity.

- Affordable housing developers should partner with local organizations, such as neighborhood groups, to build meaningful relationships and understand local needs. Local concerns should be acknowledged and transparently integrated into the project design and operation.
- Austin Water, the City of Austin's Watershed Protection Department, and the City of Austin Housing and Planning department's Displacement Prevention Division should collaborate in identifying anti-displacement approaches that overlap or pair well with alternative water supply strategies.
- Water and affordable housing-related funding or incentives, such as Low-Income Housing Tax Credits or CDBG-DR, should require innovative and meaningful community engagement strategies throughout the planning and design phases of projects. Stronger requirements and reporting for community participation should be enforced as projects are developed.

## ANTI-DISPLACEMENT POLICIES

Passing anti-displacement policies can provide additional layers of protection against gentrification, displacement, or any reduction of affordable housing linked to onsite reuse incentives. These strategies aim to manage neighborhood change caused by development and ensure residents have the right and ability to stay in their communities. Various cities have implemented anti-displacement strategies. For example, in 2020, Austin voters approved a transit plan that included \$300 million for an anti-displacement fund. The goal of this fund is to prevent displacement in vulnerable areas near new transit lines by maintaining housing affordability to the people who want to stay. Proactive measures such as these should follow best practices and center the needs and concerns of vulnerable communities. The following policies and recommendations are just a few possible solutions.

- The City of Austin should expand use of renter protections such as: landlord anti-harassment protection, just cause for evictions ordinances, rent regulation and stabilization, right to return policies, and source of income anti-discrimination legislation
- Decision-makers should also pursue anti-displacement plans and funds that proactively address possible displacement and involve community engagement.
- State legislatures should allow and promote local jurisdictions to amend local fair housing ordinances and pass inclusionary housing ordinances to prevent discriminatory practices and promote affordable housing units.



▲ Both community-based work and workforce capacity building are key to onsite reuse successfully integrating with affordable housing development in Austin.

## BUILDING KNOWLEDGE, CAPACITY, AND WORKFORCE

Our conversations with affordable housing builders and advocates revealed a widely-expressed need for knowledge and capacity-building around onsite water reuse strategies. Unlike solar power panels, onsite reuse systems are not as widespread or visible to the public. As a result, there is little public knowledge around the long-term benefits, true costs, technical know-how, and best practices of onsite water reuse systems. Strengthening education around the value of water, future water supplies, and the multiple benefits of equipping housing with onsite reuse can set a path for broader acceptance and interest in these systems.

Workforce development around onsite water reuse systems and One Water practices can build a workforce prepared to install, operate, and manage onsite reuse systems. Prioritizing BIPOC and low-income communities in workforce development supports an equitable approach to One Water that provides economic development to local communities. The

Northeast Ohio Regional Sewer District, for example, is pursuing this type of work by providing training, capacity building, networking, and certifications to unemployed and underemployed individuals. Equity-centered workforce development provides employment opportunities, skill-building, and upward mobility for BIPOC and low-income individuals. Practices like these ensure households receive material and long-term benefits.

- Austin Water and Watershed Protection should lead a workforce development initiative focused on onsite water reuse and other resilient water infrastructure to increase local capacity and expertise around OWR.
- Austin Water and Watershed Protection should lead an education and outreach campaign around the benefits and importance of water reuse strategies. Programming should be directed at affordable multifamily housing residents, advocates, and developers.



# Reducing Regulatory Barriers

## STRONG PARTNERSHIPS

Partnerships with design, engineering, and affordable housing experts lay the groundwork for successful projects and reduce technical roadblocks. Following an integrated design process can streamline projects by identifying opportunities and removing obstacles early on in the project development phase. This approach brings together various stakeholders from project design to building throughout the project’s process to ensure various experts can provide key input early on. Including subject-matter experts with previous experience on affordable housing or alternative water supplies is key.

As seen in the case studies, many affordable housing projects with onsite reuse are supported by nationally active investors, such as Enterprise Green Communities, who are well versed in affordable housing, green building, and onsite water reuse systems. Institutions like the International Living Future are strategic

partners for affordable housing projects that want to meet high sustainability standards, including onsite reuse. Additionally, engaging with water, housing, and equity-related city departments can promote a smooth process for the development and approval of a housing project that steers away from business-as-usual construction. Local partners can inform developers about incentives or funding provided by the city, or foster creative solutions to local regulatory barriers.

- The City of Austin should create a space for co-learning among local affordable housing developers, green building experts, and onsite water reuse professionals to encourage partnership formation across these fields.
- The City of Austin departments should work across departments to identify places where housing and water-related plans and policy conflict. Changes should foster mutual support across plans and policies to support the goals of Austin Water and affordable housing.

## SIMPLIFYING PROCESSES

Administrative and regulatory processes can present impediments for affordable housing developers pursuing onsite reuse. Making the development process for projects incorporating onsite reuse as transparent as possible will be a critical service for affordable housing developers. Similarly, flexible and simplified funding opportunities and limited fees will alleviate cost burdens for affordable housing developers working on strict budgets. As federal and local subsidies already carry complex requirements, reducing any additional time and costs associated with permitting onsite reuse is essential. For example, Portland passed policies to streamline processes for affordable housing meeting high energy, water, and indoor air quality standards using narrow requirements that maximize benefits.

- Waiving development, processing, and permitting fees should be considered, as appropriate, to lessen the costs faced by affordable housing projects. For example, water-related fees, such as connection fees, can be waived for those using onsite reuse or other One Water strategies.
- Permitting processes and codes for onsite reuse systems should be clear and straight-forward. Utilities should provide technical assistance to encourage and facilitate the uptake of onsite reuse.



▲ Foundation Communities’ projects are a leading example of incorporating green building practices into affordable housing in Austin.

# Integrating One Water in Funding Criteria

Guidelines, point systems, and other criteria established for allocating affordable housing funds or other funding sources are critical points for influencing project design. Establishing onsite reuse as a requirement or criterion in applications can influence developers to consider these systems in their designs. Doing so also increases familiarity among developers with onsite reuse systems. Low-Income Housing Tax Credit (LIHTC) competitions, for example, are major funding sources for affordable housing that currently lack attention to water conservation strategies. From federal to local funding mechanisms, One Water requirements can enable broader familiarity, interest, and development of water-resilient affordable housing.

The project selection process in Low-Income Housing Tax Credits (LIHTC) competitions is guided by Qualified Allocation Plans (QAP)

which list criteria and points values to rank proposed housing projects. QAPs have a significant influence on the type of housing that gets built using LIHTC. Water conservation is, in fact, the least-included green building strategy in QAPs. Only 15 states address water conservation through simple measures such as low-flow fixtures and water-efficient landscape, however, water reuse strategies are not mentioned.

Austin’s use of its green building rating system and S.M.A.R.T housing program exemplify how municipalities can use incentives to push developers to build with water resiliency in mind. However, better integration of incentives, AEGB ratings, and development incentives is necessary to streamline processes and achieve higher levels of water resiliency. For example, increasing the required AEGB star rating or changing the point system for water features can

position alternative water supply strategies as valuable investments. Moreover, updating rating systems and requirements to align with financial costs and characteristics of onsite water reuse systems may be needed.

- The City of Austin should update the S.M.A.R.T. Housing program and Austin Energy Green Building program to promote onsite water reuse strategies in affordable housing projects by increasing points and incentives for onsite reuse that acknowledge the long-term benefits of water reuse.
- The Texas Department of Housing and Community Affairs should update QAPs to prioritize alternative water supplies like onsite reuse.
- A national framework for green building requirements should be established that requires all states to target various green building strategies in federal and state funds. In particular, water conservation and related measures should highlight alternative water supplies as solutions.



# Reconceptualizing Costs and Benefits

Current methods of calculating costs and benefits do not fully capture all the social, economic, and environmental benefits achieved through green building features such as alternative water sources. Changing how we account for the costs and benefits of onsite reuse, particularly in affordable housing, can open new avenues for funding and balance upfront costs. A life-cycle cost analysis and a multiple benefit framework show promise for rethinking the benefits of onsite reuse.

A life-cycle cost perspective considers both the capital and operating costs over the expected life of a building, enabling us to measure the savings from water efficiency and reuse measures beyond the initial costs of development. This long-term approach is critical when considering the future impact of climate change on the demand, availability, and cost of water supplies. As a water supply and climate resiliency strategy, onsite water reuse systems provide long-term benefits as adaptive strategies to future water costs and availability.

The Pacific Institute's Multibenefit Framework provides another effective approach to reconceptualizing benefits. The framework considered the broad range of benefits and beneficiaries



that come with implementing certain water management strategies through stakeholder engagement. A recent study used the framework to demonstrate the multiple benefits for a rainwater capture system in Austin, Texas. The framework can identify multiple benefits and trade-offs that are then negotiated to develop partnerships between city departments, NGOs, and residents. Economic, environmental, and social benefits are all considered in the framework. Findings from our rainwater catchment case study found that creating stronger relationships between stakeholders to develop co-funding agreements makes water management projects easier to implement and scale.

▲ The Pacific Institute's Multi-Benefit Framework provides an effective method for reconceptualizing the costs and benefits associated with incorporating onsite reuse.

With onsite water reuse systems, a multi-benefit framework can lead to new partnerships and funding streams that meet the goals of housing authorities, urban development departments, watershed departments, and utility departments.

Connecting affordable housing and water stakeholders, along with community engagement, can lead to an evaluation of alternative water strategies that provide co-benefits to all stakeholders and lead to co-funding mechanisms.

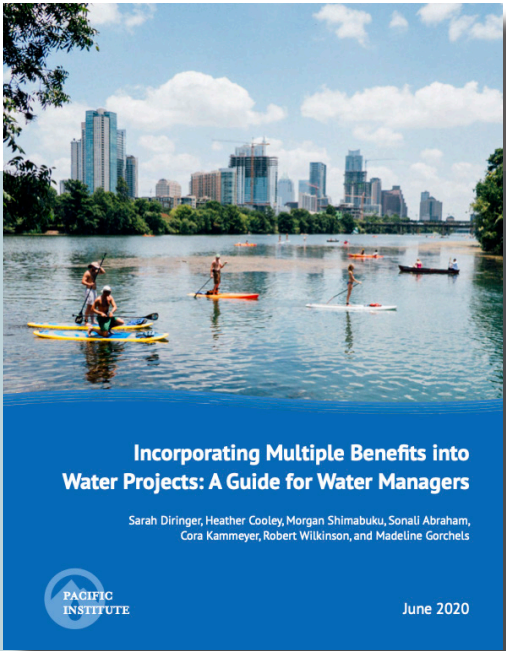
The results from a multi-benefit

framework may identify opportunities for incentive stacking. Incentive stacking combines rebates and incentives from different programs to create bigger opportunities for funding water management projects than would have otherwise been available. This is accomplished through intentional coordination and careful consideration and quantification of multiple benefits. The City of Austin's Rain Catcher pilot program incorporates rebates, discounts, and funding from three city departments: Watershed Protection, Urban Forestry and Austin Water. Pairing their resources together enables them to meet goals from both departments. Further work should consider opportunities for incentive stacking to fund affordable housing projects with resilient water management strategies.

• Austin Water should conduct a multi-benefits analysis to identify areas of collaboration across city departments, gain stakeholder feedback, and collaborate in creating funding and incentives for integrating onsite water reuse systems in affordable housing projects.

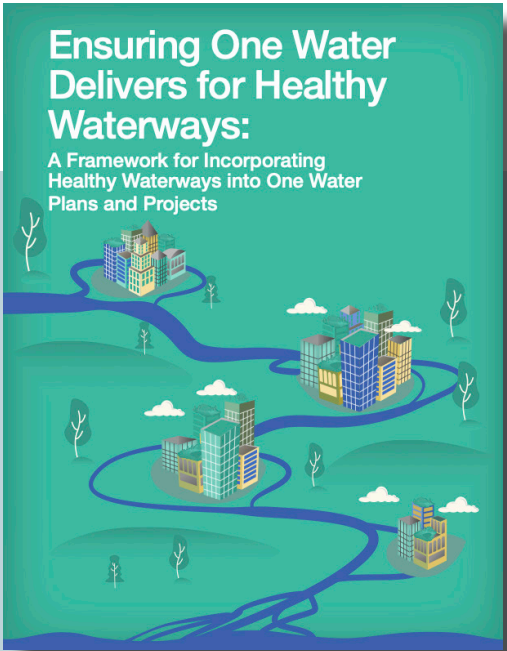
• Affordable impact statements by the City of Austin should consider the long-term benefits of having an onsite water reuse system, taking account of future climate impacts to water supply and demand.

• LIHTC and other financing mechanisms should balance the long-term savings of onsite reuses with additional upfront costs when considering the level of financing provided.



*Incorporating Multiple Benefits into Water Projects* uses a multi-benefit framework to provide a modular, flexible approach for water managers interested in incorporating multiple benefits into water management decisions.

Many of its principles can be applied to projects and programs focused on incorporating onsite water reuse into housing development.



*Ensuring One Water Delivers for Healthy Waters* applies a multi-benefit framework specifically to One Water planning and projects.

The guidebook's community-visioning resources can help both affordable housing developers and city planners with developing projects that incorporate onsite reuse in manner that reflects community values and needs.

# About Us

The National Wildlife Federation is America's largest conservation organization uniting all Americans to ensure wildlife thrive in a rapidly-changing world.

NWF has more than two decades of experience working on Texas water issues. Its Texas Coast and Water Program promotes integrated urban water management and nature-based flood mitigation solutions to improve climate resilience in the state.

To learn more about the authors visit:  
[texaslivingwaters.org/meet-our-team](https://texaslivingwaters.org/meet-our-team)

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