



THE CITY OF EL PASO'S RESILIENCE AMBASSADOR'S PROGRAM

Texas City Efficiency Leadership Council Best Practice

El Paso: Resilience Ambassadors Program

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Project Description

Cities are seeking new ways to engage their residents on energy efficiency and sustainability issues. While many cities provide educational workshops on conservation topics, the City of El Paso wanted to take these workshops a step further by providing businesses with the opportunity to install weatherization measures in their buildings and save resources within the community.

El Paso has long been a leader in municipal energy and water conservation initiatives, and in 2017, the city launched its unique Resilience Ambassadors program. The Resilience Ambassadors program trains engaged volunteers how to install simple and low-cost energy and water savings measures in buildings. After volunteers attend a one-day Resilience Ambassadors training, they participate in community workdays where they complete these energy or water retrofits in local businesses in El Paso.

These volunteers do not need to have prior building or construction experience, and many of them are college students who are interested in gaining the experience needed to join the sustainability sector. Participating businesses also benefit from the increased exposure and free conservation measures they receive through the program.

Planning for the Resilience Ambassadors program took place from January to July of 2017. During that time, El Paso developed the framework of the program, made arrangements with local training and business partners, and recruited volunteers.

In August 2017, the first Resilience Ambassadors workday took place where volunteers installed faucet aerators and spray nozzles in a local restaurant. The second community workday took place at a homeless shelter in El Paso. Resilience Ambassadors retrofitted 50 housing units at the homeless shelter with energy and water savings measures, which included more than 160 faucet aerators and 200 LED lightbulbs.

The Resilience Ambassador program was possible through the City of El Paso and key partnerships with Cities of Service, El Paso Electric, El Paso Water, Western Technical College, and local energy efficiency, water efficiency, and greywater conservation experts.

Motivation

The objective of this program was to improve the resilience of El Paso, decrease water and energy use in local businesses, provide hands-on conservation education to residents, and encourage volunteering. Although many cities provide informational workshops on energy efficiency topics, El Paso wanted to provide a pathway for volunteers to implement that knowledge within local businesses and achieve tangible energy savings. The training and workdays were designed to focus on building retrofits that were impactful, such as the installation of faucet aerators and sealing of air leaks. Because volunteers were not required to have prior experience in building science or construction, the measures selected for the program needed to be simple to install.

Implementing the Program

To select the initial group of participants in the Resilience Ambassadors program, the City of El Paso issued a call for volunteers. Volunteer requirements for the program included the willingness to participate in three free sustainability trainings and ongoing monthly retrofit workdays at small businesses.

RESILIENCE AMBASSADOR TRAINING AREAS

- Water Conservation in Restaurants
- Greywater Conservation
- Weatherization

Program organizers worked with local university professors to recruit volunteers. This strategy worked well and resulted in many college students applying to volunteer. Other recruitment activities included posting the volunteer position on job searching websites and sharing the information

through the United Way, local neighborhood organizations, and El Paso's social media platforms.

Once the Resilience Ambassador candidates were reviewed and processed through the city's human resources department, they attended three hands-on sustainability trainings where they learned to install simple retrofit measures. A local expert taught the Resilience Ambassador training in the following distinct topics:

- **Water Conservation in Restaurants**

A representative from El Paso Water, the municipal water utility, taught this training. Volunteers learned how to install water-smart faucet aerators and pre-rinse sprayers in a restaurant setting, which are more efficient than conventional aerators and sprayers.

- **Weatherization**

A local energy consultant who was referred by El Paso Electric, the municipal electric utility, taught this training. Volunteers learned how to conduct a simple energy audit, operate a blower door, and perform simple measures such as solar tinting, lighting retrofits, weather-stripping, and caulking.

- **Grey Water Conservation**

A professor from a local technical school taught this training. Volunteers learned how to capture condensate from HVAC systems and redirect it to a catchment or runoff point.

The first hour of each training took place in a classroom in a lecture format, and the second hour of training involved a hands-on demonstration of the retrofit measures. El Paso Water and El Paso Electric donated most of the equipment necessary to perform these retrofits including aerators, spray nozzles, caulk, and sealant.

Two or three weeks after each training, El Paso scheduled a volunteer workday. The workday typically took place on a Friday afternoon or Saturday morning, and on workdays, the Resilience Ambassadors arrived at a local business to implement the retrofit measures that were covered in their training. These workdays occurred monthly and offered an opportunity for Resilience Ambassadors to reconnect, implement the retrofit measures in a small business, and make an impact on the community. A total of 21 volunteers were trained as Resilience Ambassadors in 2017. Each workday garnered participation from 10 to 15 Resilience Ambassadors, depending on their schedules.

Participating businesses received the water conservation and weatherization upgrades at no cost; however, the businesses that received grey water conservation upgrades were required to purchase their own catchment systems. The first water conservation upgrade was performed on the Mustard Seed Café in El Paso, and the first weatherization upgrade was performed on a local homeless shelter.

Partnerships with utilities, colleges, and energy experts were crucial to the success of the Resilience Ambassador program. El Paso Water already managed a water conservation program for restaurants, and provided guidance, training, and expertise for this component of the Resilience Ambassadors program. El Paso Electric referred the City of El Paso to a local energy consultant who developed and taught the weatherization training. A local professor from Western Technical College developed and taught the grey water conservation training. All of these

partners also assisted in identifying businesses for the hands-on trainings and workdays.

Lessons Learned

El Paso successfully launched its Resilience Ambassadors program and identified several takeaways to assist cities considering participating in a similar program.

Topping the list of recommendations is for cities to recruit reliable and enthusiastic program partners at the very beginning and rely on the expertise of those partners when designing the program. El Paso's partnerships with local energy and water efficiency experts shaped the design of the program and resulted in a high level of support, participation, and public awareness.

These partners provided recommendations on which retrofit measures to include in the program, created the course curriculum, identified potential businesses for field training and workdays, and in some cases even supplied the retrofit materials.

As an example of city-partner collaboration, pipe insulation was originally going to be included in the water conservation retrofit measures performed by Resilience Ambassadors. Based on feedback from a local expert regarding potential liability concerns with installing pipe insulation, this measure was removed from the list in favor of more simple measures.

In addition, program organizers recommend that city departments work together to clarify volunteer application requirements and acceptance procedures at the beginning of program design. The Resilience Ambassadors program is unique because it results in members of the public installing measures in brick-and-mortar businesses, and multiple departments within a city may need to approve an appropriate process for accepting and onboarding these volunteers. Cities also need to consider requiring participating businesses and volunteers to sign waiver forms.

Lastly, organizers say flexibility is key when launching the program for the first time. Once volunteers are accepted into the program, city staff should be willing to work around the schedules of volunteers, within reason, to ensure the volunteers can participate in the program even if they must miss parts of the training. This flexibility gives volunteers a way to stay involved in the program even when scheduling conflicts arise.

RETROFITS PERFORMED

- Retrofits Performed
 - Installation of Faucet Aerators
 - Installation of Pre-Rinse Sprayers
 - Application of Caulking
 - Weatherstripping
 - Simple Energy Audit
 - Blower Door Test
 - Solar Window Tinting
 - HVAC Condensation Capture & Redirection
 - Greywater Capture & Runoff System Installation
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Success & Impact

The installation of aerators, pre-rinse sprayers, solar tinting, high efficacy lighting, caulking, and weather-stripping has saved small businesses energy, water and money. The volunteers installed their first retrofit measures in August 2017, and the city expects to see measurable energy and water savings from the program by the spring of 2018.

Besides the energy and water saved through the program, the enthusiasm of the volunteers did not go unnoticed. By participating in the program, Resilience Ambassadors met local experts in energy and water efficiency. Since many Resilience Ambassadors were college students, this provided a unique networking opportunity in addition to the hands-on learning that can be highlighted on their resumes.

Participating small businesses have enjoyed working with the program and receiving the benefits of free energy and water retrofits as well as increased

exposure of their business. El Paso originally planned to recruit businesses by giving presentations at local business groups, but demand has been so strong through word of mouth and partnerships that the city has not needed to conduct extensive outreach to recruit business participation.

In the Water Conservation training module, Ambassadors learned how to measure the amount of water coming out of a sink per minute. Volunteers were shocked to witness the amount of water wasted during the in-class activity. As a result, several of them purchased and installed faucet aerators in their homes. Although this was not an initial goal of the program, once Ambassadors saw the impact of these simple measures, they were eager to integrate them into their homes.

Cities who are interested in engaging volunteers and providing education that result in tangible energy savings can look to El Paso's Resilience Ambassadors program as an inspiring and impactful model.

PROGRAM AT WORK

"We love the new spray nozzle! It's more powerful than our old one and makes it easier to clean dishes. It's a win-win for us."

– Mustard Seed Café, Participating Business



Ambassador trainees attend one-day training on low-cost energy and water saving measures.



Resilience Ambassadors demonstrate use of a low-flow pre-rinse spray valve.



Ambassadors use flow meter bag to measure flow rate of low-flow faucet.



Volunteer Ambassadors learn how to conduct a simple energy audit.