

Seeds of Success: EPA's Targeted Brownfields Assessments Help Denver's Urban Gardens Flourish



EPA Region 8

Denver Urban Gardens (DUG) started out in 1985 as a small, modest organization with the goal of helping Denver residents create sustainable, food-producing neighborhood community gardens. Today, DUG is well known by the people of Denver—the organization currently manages 157 gardens throughout the mile-high city, including more than 40 that are school-based. These gardens not only beautify urban (and often low-income) neighborhoods and improve soils, they strengthen community ties, let people see their neighborhoods as better places to live, and generate fresh produce for communities with reduced access to it—more than 600 tons in 2015 alone. DUG also trains community-designated “garden leaders” in the day-to-day management of their gardens; provides courses in community gardening, composting, and related curricula; offers youth education programs in both gardening and nutrition; and offers expertise and guidance across a wide range of garden-related issues, including securing land and linking gardens with local food system projects and policy.

Following a conversation with a DUG representative at an EPA meeting, EPA Region 8 (which covers Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations) realized the Agency's Targeted Brownfields Assessment (TBA) program might be a perfect complement to DUG's efforts. EPA's TBA program offers environmental assessments, at no cost to the TBA requestor, to help communities minimize or remove the uncertainties of contamination on brownfield properties. “EPA has been an incredible resource,” explained Jessica Romer, DUG's Director of Horticulture. “We can now be far more comprehensive in our soil testing approach—not only in testing the soil, but having the expertise to understand the results, and at no cost to DUG. It's better for us and better for the communities that now have new gardens—a mutually beneficial arrangement.”

Through the TBA program, EPA tests new or expanded garden sites DUG has selected for contaminants such as heavy metals, polycyclic hydrocarbons, petroleum, and pesticides—common byproducts of industry and urban environments. The first 12 sites tested by EPA gave DUG a “green light” to proceed, and gardens now grow in all twelve of those initial sites, three of which are highlighted below:

Asian Pacific Development Center

Aurora's Asian Pacific Development Center is a community-based, nonprofit organization founded in 1980 to serve the needs of Colorado's growing Asian American and Pacific Islander population. The center helps immigrants and refugees by providing them with medical care, legal assistance, health classes, citizenship tests, and general assistance in adjusting to life in a new country.

In 2014, staff noticed an unusual trend when clients left after help sessions: often, visitors to the Center would sit next to a small garden patch adjacent to the building while they waited for the bus. “They just sat and stared at the plants, and wouldn't take a chair or our offers to wait inside,” staff explained.

The Center's staff realized that since many of their clients had been farmers in their home countries, plants had a calming effect in their transitions to Denver and the U.S.



Courtyard garden at the Asian Pacific Development Center.

Recognizing the importance of what they were seeing, Center staff took action. Already aware of DUG's efforts in growing gardens throughout the city, they asked the organization's help in establishing an on-site garden that clients could enjoy. DUG agreed, but recommended that the soil be tested for potential contaminants due to the Center's proximity to former and active gas stations and dry cleaners. "It was something I would have never thought to do," explained Jane Lundwall, the Center's Director of Marketing and Development.

Through DUG's partnership with EPA, the Agency provided a Targeted Brownfield Assessment—at no cost to DUG or the Center, which was especially important to a nonprofit entity—that confirmed the garden project was safe to proceed. Visitors to the Asian Pacific Development Center now enjoy a community garden in the Center's courtyard. Staff at the center appreciate the relief it brings to clients in the midst of transition. "It's empowering, and makes them feel normal again, like they haven't left their country. Just providing this space for them makes an important difference in their lives; they go from depressed to instantly feeling better when they garden at the center."

That positive outlook—and the collaboration between DUG, the Center and EPA—continues. TBA resources are now being used to assess an open plot of land adjacent to the Center for use as another, much larger garden, to meet the needs of the Center as well as the neighborhood in general. "We have some concerns because the property is even closer to a former gas station," said Jessica Romer. "But if there are any contamination issues, the TBA will let us know what we need to do to proceed."

Triangle Park

Located at the corners of Lawrence Street, Park Avenue and Broadway in the heart of downtown Denver, Eddie Maestas Triangle Park (named after a key figure in the neighborhood's development) is a classic example of a "brownfield." More of a triangle-shaped space between busy streets than a traditional park, the quarter-acre site had contamination concerns due to use as an auto service station more than a half-century earlier, as well as the toxic byproducts of vehicle exhaust from years of heavy traffic. In addition to these concerns, the park had become a haven for drug deals—to the point where it was featured on National Geographic's *Drugs, Inc.* television series. In response, Denver Parks and Recreation (DPR) closed Triangle Park, hoping to rehabilitate both the site and its image.

DPR had previously enjoyed several successful collaborations with DUG, with a number of DUG-managed gardens already located on city park land. Through a series of community meetings, DPR and DUG worked with local stakeholders to explore viable reuse options for the park. The area's neighborhood association had already expressed interest in a garden, and DUG/DPR's meetings confirmed high levels of support for transforming the park into one. EPA's TBA program conducted sampling; and once again, found no contaminants of concern and gave the go-ahead for the project.

Today, Eddie Maestas Triangle Park is home to a thriving garden that uses every square foot of the formerly notorious site.

Featuring a mix of herbs, flowers and vegetables, the garden is in its second season of growing, with multiple plots managed by neighboring residents. It's a project that has transformed a decrepit, crime-plagued area of the city into a much-loved community asset.



Volunteers construct planters at Triangle Park.

This former haven for drug deals has become a thriving garden with multiple plots managed by neighboring residents and a much-loved community asset.

Hinkley High School

Targeted Brownfields Assessment funding was also used to confirm lack of contamination in soil (giving the project the go-ahead) on land owned by Hinkley High School (HHS) in neighboring Aurora. HHS students had expressed interest in establishing a community garden on school grounds, to enhance both garden-based nutrition education and the school's connection with the surrounding neighborhood. DUG had partnered with Aurora Public Schools (APS) on an earlier garden, and again lent the organization's guidance and expertise. Several meetings were held with school administration to verify interest and explore ways of integrating the garden into the local culture. "The whole process has been a great partnership opportunity with EPA, DUG and APS," said Rita Davis, Environmental Compliance Manager with APS. "We were able to establish a baseline assessment criteria that we now use to assess all of our garden sites to ensure there is no contamination."

Another of DUG's partners, Bridging Research and Aurora Neighborhoods for Community Health (BRANCH)—an organization that promotes, supports and implements programs that encourage Aurora community members to take active roles in their health and the health of their communities—helped to secure additional funding for the garden at Hinkley High School, including a generous grant from the Piton Foundation. Piton, which invests in for-profit and philanthropic solutions for Colorado's low-income children and their families, provided \$137,500 for the development of this and a second community garden in Aurora—as well as related science-based curriculum—over the next 3 years (split equally between the two projects). The students' own grant applications brought in an additional \$7,000 to move the project forward.

Completed in 2014, the Hinkley High School community garden prides itself on being all-organic and grows more than 16 varieties of produce—some of which is served in the school's own cafeteria.

"It's a large garden that has been very successful," explained Jessica Romer. "Projects like this become a nice sharing of resources between the school and the community, where the school provides the land and the community provides support for both the educational components and by tending to the garden when school isn't in session."

These three projects are just a sampling of the types of success DUG has enjoyed creating gardens across Denver and neighboring cities, and the benefits of collaboration with EPA's TBA program. The partnership of EPA and DUG through Targeted Brownfields Assessments is a logical one, removing concerns standing in the way of turning blighted property into gardens. As mentioned, the first 12 sites tested by EPA through the Agency's partnership with DUG enabled all of those projects to move forward, and currently 12 additional, potential DUG gardens are scheduled for TBA sampling. It's safe to say that eventually most if not all of those sites will be generating produce for local residents and beautifying the streets of Denver for years to come.

The successes in Denver and Aurora can be replicated in other communities across the country. For additional information about EPA resources and technical assistance for similar community garden and urban agriculture projects, please visit www.epa.gov/brownfields/brownfields-and-community-supported-agriculture.

For more information about Denver Urban Gardens, please visit www.dug.org, email dirt@dug.org or call (303) 292-9900.



A portion of the Hinkley High School Garden.

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