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Leveraging Community Support to De-vine New Haven's Natural Areas

This case study discusses the Urban Resources Initiative's efforts to remove invasive vines from natural areas in New Haven, CT. The Urban Resources Initiative (URI) is the primary urban forestry organization in New Haven, and community engagement is a key feature of their programming. Working with a combination of local stewardship groups ("Community Greenspace") and a workforce program ("GreenSkills") for previously incarcerated individuals and teens, URI began hosting vine removal workdays in New Haven's parks as a way to both protect critical components of the city's forest canopy and build interest and investment in the city's natural areas.

Keywords

urban forest management, urban ecology, community engagement, workforce development, invasive species

CONTEXT

The Urban Resources Initiative (URI) is a non-profit organization focused on urban community forestry in New Haven, CT, since 1991. URI works with local residents, municipal staff, and community leaders to promote community-based land and tree stewardship, restore neglected open spaces, and build social cohesion in urban neighborhoods through their Community Greenspace and GreenSkills programs. URI has built a strong reputation with the city for being a reliable and capable partner in managing the urban forest and public greenspaces. URI's track record of high survival of trees planted via Community Greenspace with volunteers led to a sole-source contract with the City to plant all its street trees and park trees starting in 2007. This annual contract is the basis for funding the GreenSkills (paid green jobs) program.

The onset of the COVID-19 pandemic forced a pause in URI's tree planting program, which created time for the staff to reflect on urban forest management needs more holistically and recognize that removing invasive vines was the most effective strategy the organization could carry out to protect the urban forest and save existing and emerging canopy. Through URI's Community Greenspace program, a few volunteer groups were already engaged in invasive vine removal during the summers, but in a relatively ad hoc manner. In the winter and spring of 2021, URI launched efforts with Community Greenspace volunteer groups to remove Oriental Bittersweet systematically from neighborhood parks. For parks without Community Greenspace groups, URI crowdsourced \$7,000 (matched by Sustainable CT) to provide paid-green job training to individuals who previously experienced incarceration through the Greenskills program to help remove vines. This new initiative allowed URI to address the threat of invasive vines more broadly in the urban forest. Moreover, the demand for year-round volunteer stewardship activities was growing as a safe way to be present in the community during the pandemic. The vine removal activities offered a way for URI to engage more stewardship groups in the winter months when other stewardship activities were not taking place.

GOALS

URI set a goal to engage more audiences in New Haven's natural areas and specifically to create employment opportunities for groups who typically do not volunteer with URI (e.g., youth, newly immigrated, and previously incarcerated individuals) to remove vines in parks without existing stewardship groups. To that end, URI also set a goal of promoting restoration in every New Haven city park, not just those with existing stewardship groups. URI also set a goal to develop a work plan based on need and ecological benefit – i.e., riparian more important than upland, neighborhoods with less park and forest cover over resource-rich neighborhoods.

APPROACH

With a population of 134,000, New Haven, like many smaller cities, has limited resources allocated to the maintenance and care of the city's public park system. Forested natural areas, in particular, are overlooked spaces as the New Haven Department of Public Works, which is the municipal department charged with the care of public parks, lacks the capacity to work in these spaces. Without a formal workforce, local stewardship groups are a critical source of labor. URI

leveraged this labor to carry out its city-wide vine removal program in the spring of 2021. This program involved training and leading volunteers and paid crews to conduct vine removal throughout the city. Out of 76 parks, 21 have more than one acre of tree cover, with East Rock Park home to the greatest at 120-acres out of 165-acres of New Haven parkland. URI is actively managing invasive vines in 10 parks with Community Greenspace volunteers. The City of New Haven has sixteen parks with natural areas affected by invasive vines. URI trained and supported volunteer groups in eight parks and trained and supervised GreenSkills crews to work in three parks. URI staff-initiated interventions in the remaining five parks and additional public lands.

URI crafted the pitch below to recruit volunteers/stewardship groups for these vine removal days to reach the general public.

Goals	Protect large and emerging native trees from mortality by removing invasive vines.
	Empower people to volunteer to protect trees as part of their environmental activities.
Rationale	Forests are important habitats for migrating birds; they provide ecosystem services and beauty.
Threat	Vines pull down young trees.
	Vines cover the foliage of both small and large trees, outcompete for sunlight, prevent trees from photosynthesizing, and cause mortality.
	Vines girdle tree stems, preventing trees from adding to the cambium layer, causing mortality.
	Vines add weight to branches, increasing the potential to break during ice and/or snow events, and causing wind to rip off branches and/or down trees.
	Vines create pathways ('ladders') for other vines to seek sunlight and further dominate trees.
Action	Remove vines and potential pathways from the ground to 6-feet up the tree. Remove any 'ladders' such as low branches and brush when possible. Focus on native trees and prioritize invasive vines over removing other invasive vegetation.
When	As soon as possible, but winter is an ideal season to remove vines. Heavy clothing protects against thorns; vines are most visible after leaf fall. Vine removal in winter does not disturb nesting birds and allows new tree growth in spring to be unimpeded.
Where	Any New Haven public space or private lands with permission.
Tools	Hand clipper, hand saw or loppers, gloves, heavy clothes, and protective eyewear (if desired).

URI utilized a web tool called "Sign-up Genius," which enabled potential volunteers to review a description of the workday, times, locations, and other participants. On the day of the removal, URI staff flagged areas and any small or medium-sized trees in need of vine removal. Volunteers were encouraged to bring their own tools (such as loppers and hand clippers), but URI provided tools as needed. Each workday started with a welcome and introduction to the importance of this work, followed by general rules:

1. Any vegetation with thorns can be cut to access the vines for removal.
2. Vines with hairs or tendrils should not be cut (likely native).
3. Grape vines that are tagged to be left as-is; untagged to be removed.

4. Clip low, clip high, stomp. (Clip at ground level, clip at 5-6", and stomp on and leave the clippings that fall on the ground.)
5. Do not pull vines to avoid breaking branches, which could injure the trees and people.

At the end of the training, URI staff would end with a story about the importance of Virginia creeper and its relationship to breeding cardinals to remind volunteers that some vines are useful and should not be removed.

URI encouraged volunteers to work and chat in social groups to help newer volunteers learn from the more experienced. URI staff circulated to connect with volunteers and offer encouragement and positive reinforcement. Each session ended with a group photo and a story about how a person can change or beautify their world with a simple change in habits. For example, the story of how a person who lives in a village where they must carry water from a well might be criticized by fellow villagers for having a hole in his bucket, leaving a dripping trail of water as he walks the path back from the well. But if the villagers knew that he had previously planted seeds along the trail and was purposefully watering them as he walked, they might revere him for spreading beauty for all to enjoy. Like the water bearer, we remove vines so that others might enjoy the shade and beauty of the trees we save, and we encourage people to take clippers with them to carry it out wherever they may wander.

While volunteers and stewardship groups are key resources in many of New Haven's city parks, many parks lack designated stewardship groups and are in underserved neighborhoods, exacerbating access inequities to quality green spaces. To conduct a comprehensive vine removal program that included work in all of New Haven's city parks, URI expanded GreenSkills program activities, with a new partner, EMERGE CT (a local non-profit whose mission is to provide wrap-around services including employment opportunities for previously incarcerated individuals returning to New Haven). GreenSkills participants from EMERGE were hired, trained, and supervised by URI to remove vines in three parks.

Together, groups utilized specialized and traditional hand tools to cover large areas quickly. With funds from Sustainable CT and individual donors, they purchased battery-powered hedge clippers, power pruners, and reciprocating saws with nail-embedded wood blades. The crew took to the tools and enjoyed the work, regardless of weather three days a week in three two-hour shifts with half-hour breaks. Wool socks and hand-warmers assisted in comfort. Sites included city parks, DOT ROW, and a half mile of a riparian park and the headwaters of that same river in a neglected forested park.

RSOURCES

This project was funded primarily through the Urban Resources Initiative. Other partners include the City of New Haven and New Haven Land Trust/Gather New Haven, who permitted work on the lands. Additionally, EMERGE, Yale University, Eli Whitney Museum, New Haven Promise, and Southern Connecticut State University were the sources of many volunteers and paid stewards. Local stewardship/park-friends groups from New Haven's city parks provided much of the workforce for these efforts. Sustainable CT and individual donors provided financial support.

KEY RESULTS

- Approximately 500 volunteers engaged in vine removal in 2021.
- Vine removal activities conducted in every New Haven forested city park, and additional land trust preserves.
- Vine removal workdays helped mobilize stewardship groups to target other invasive plants such as burning bush, tree of heaven, and multiflora rose in their respective parks.
- Vine removal workdays reinvigorated many stewardship groups and set a precedent for conducting year-round work in the parks.
- Crews of six previously incarcerated people were paid for about 600 hours of winter work and were exposed to a wilder sense of nature.

Contact and additional resources:

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Relevant websites and publications:

<https://uri.yale.edu/>

<https://hixon.yale.edu/>

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