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Managing Urban Forested Natural Areas

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Maintained Trail in Urban Forested Natural Area

When we talk about urban forests, we typically refer to all the trees with a city, including street trees, landscaped trees, public parks, private and institutional property, and forested natural areas. Those forested natural areas are different from street and park trees in their composition, size, biodiversity, wildlife habitats, and how they are managed. Natural areas account for 84% of urban parkland, but often go unnoticed, underused, and under resourced and unprotected. In New York City, forested natural areas make up 5.5% of the city land area and contain approximately 70% of the total number of trees.

Urban forested natural areas are critical to improving the quality of life for residents, but they need some management. Invasive species management is the most conducted and required activity. Other threats to these natural areas include trash and debris dumping, deserted homeless camps, soil erosion on unmarked/unmanaged trails.

In 2018, the [Natural Areas Conservancy](#), the [Trust for Public Land](#), and the [Yale School of Forestry & Environmental Studies](#) completed a survey of organizations that manage urban forested natural areas. The findings of that survey were written into [Untapped Common Ground: The Care of Forested Natural Areas in American Cities](#). The [Natural Areas Conservancy](#) hosted “**Forests in Cities: A National Workshop**” in 2019 to bring together a national network of parks and forestry professionals to collaborate and explore the challenges and opportunities of managing natural forested areas.

In cities that are managing forested natural areas, volunteer organizations tend to be an important component of successful management. Volunteers conduct clean-ups, removing trash and debris, plant native trees and shrubs, improve and maintain trails, and even help remove invasive plants. Those organizations also conduct environmental education, public outreach and engagement, fund raising for projects, natural resource & wildlife inventories, research, and green job training for urban youth.

In Pennsylvania, some of those non-profits working to protect, restore and interpret forested natural areas include [Tree Pittsburgh](#), [Western Pennsylvania Conservancy](#), [Fairmont Park Conservancy](#), and the [Wilkes-Barre Riverfront Parks Committee](#), which helps manage a 91 acre riparian forest along the Susquehanna River. The [Nature Resources Group](#) of the New York City Parks Department has been working to manage and restore over 10,000 acres of forest and wetlands since 1984. They have created many management plans and resources such as [Guidelines to Urban Forest Restoration](#) that can be useful to other groups working in urban forested areas.

Wilkes-Barre Riverfront Parks Committee

In 1990, the Riverfront Parks Committee, a grassroots organization, was formed in Wilkes-Barre, Pennsylvania to investigate the potential of recreational use of a 91-acre urban floodplain forest along the Susquehanna River located within a four-block walking distance of the city’s downtown district. The development of the Wyoming Valley Levee system in the 1930’s created the riparian forest, but its physical landscape also serves as a barrier to its use and understanding. Public perception was a major hurdle in the development of a riverfront park that respected the ecological integrity of the floodplain.



Aerial image of the 91 acre forested natural area in the City of Wilkes-Barre

Public perceptions of the riparian forest were that they were un-kept, un-safe, caught flood debris, and slowed flood waters causing larger floods that might overtop the levees. Natural meadow succession areas were thought of as tick and snake breeding, un-maintained fields that someone may set on fire, but could be used as athletic fields if someone would just mow them. The public also questions whether the area is a true park since it contains no ballfields and is not properly maintained for recreational use. In association with other negative public perceptions about the park came the issue of a natural forest setting becoming habitat for criminals. Although there were no reported crimes committed in the forest, this issue was one that worried parents and fueled a debate to clear much of the forest, specifically the understory, which had become inhabited by Japanese knotweed (*Fallopia japonica*) an exotic invasive, herbaceous plant that reached 10-12 feet each year, blocking visibility through the forest and trails.

Several of the natural resource professionals that are on the committee were concerned about the invasive Japanese knotweed that was taking over the understory, preventing woody regeneration and crowding out a diverse mix of native herbaceous plants. If the forest overstory was to die or is removed, the fear is that the area would become one large thicket of knotweed, providing little habitat and soil stability that the forest does.

Partnerships and Outreach

In an effort to manage the urban riparian natural area, the Wilkes-Barre Riverfront Parks Committee became a 501.c.3 non-profit organization that quickly discovered the key to success was developing partnerships and educating the community about the importance of natural area that provided important habitat for migrating songbirds while preventing riverbank erosion.

As many in the field of community forestry have learned over the years, the key to protecting natural resources in our communities is educating the public about their importance and value while building a strong awareness of the need to protect and manage the resource. Without a strong effort in these areas, the committee would have disbanded long ago, and the forest removed for flood control.

The Riverfront Parks Committee began its outreach during public forums that were held during the master planning process. It was soon followed by a successful partnership that funded a park naturalist. The naturalist programming in the park worked to get people of all ages to discover the natural floodplain forest. School groups, day cares, scouts, 4-H clubs, senior citizen groups, bird watchers, hikers, bikers, runners, and canoers all began requesting programs and using the park regularly. Environmental education in the park was critical in changing public perception about floodplain vegetation, crime, and the river. The park naturalist and committee members also delivered programming in local school settings and to various organizations such as the chamber of commerce, downtown businessmen's association, and rotary clubs to name a few. In addition to the diverse programming that the park naturalist provided regularly and on request for groups, the committee developed interpretive signs, brochures, newsletters, and trail guides for the public. Interpretive signs, user brochures, and maps have gone a long way to increase public awareness, use, and stewardship of the natural forested area.

Community Involvement

Another critical component in protecting and restoring natural systems in urban areas is community involvement. In the case of the Riverfront Parks Committee, community involvement took many forms, but most importantly volunteerism in the restoration and maintenance of the park. Volunteers were initially utilized for trash cleanups, cutting invasive knotweed that filled the understory, mowing small turf areas, and assisting the naturalist in programming. It soon evolved to trail building, the removal of over 1500 tires from the banks of the Susquehanna river, storm damage cleanup, native trees & shrub plantings, planning public events, newsletter and brochure development, public speaking, fund raising, and grant writing.



Volunteers cutting Japanese Knotweed

Each occasion that the committee involved volunteers became another opportunity to educate and inform people about the importance of the forested natural area. For example, as corporate volunteers assisted with trail work during a United Way Day of Caring they learned that the riparian forest serves as critical habitat for migratory and nesting birds that use the Susquehanna as a flyway. These volunteers are now park users and supporters of efforts to protect the area.

Many continue to volunteer for monthly cleanups or large projects such as the planting of over 140 large trees and understory shrubs. Without diverse support from the community, the natural area would be viewed as just another cause of the environmentalists.

Safety in Urban Forested Areas

The issue of safety in urban forested areas can be a valid community concern. Safety issues can be addressed through partnerships with local police and crime watch volunteers that provide periodic patrols. In the case of the Riverfront Parks Committee, the local crime watch was seeking higher visibility and was willing to provide volunteer bike patrols. The committee also developed good relationships with local police that have led to patrolling by bike police and a newly introduced horse mounted unit. The trail visibility and forest regeneration issues are being addressed through volunteer cutting and follow-up herbicidal treatment of the Japanese knotweed in the understory. These treatments demonstrated a low maintenance, and a safe effective control of invasive plant material in a forest understory to environmentalists and other users. With the help of an ISA certified arborist, and grant funds, over 15 linear acres of Japanese knotweed, mostly along trails, have been converted to native herbaceous vegetation and woody regeneration.



Periodic police and crime watch volunteer patrols maintain safety along the trails



Herbicidal treatment of re-sprouting knotweed

As our urban and suburban communities continue to expand, the protection, restoration, and management of forested natural areas within these urban areas will become an even more critical as we try to provide improved health, recreation, and quality of life to its residents. Only through community based environmental education, sustained community involvement, and diverse partnerships can we protecting and manage urban forested natural areas.

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