



CASE STUDY

Regenerative Park Design

Green City

Issue: Vacant Properties

Decades of underinvestment and systemic racism have led to high residential vacancy rates in many communities of color in the US. High vacancy is associated with wider neighborhood impacts, such as:

- High unemployment rates
- High crime rates
- Decaying building stock
- Lack of high-quality community spaces.

Cities require innovative solutions to improve quality of life in these areas. Converting vacant houses to parks through regenerative design can help.

What is Regenerative Park Design?

Regenerative park design involves renewing degraded urban areas by constructing parks. This approach aims to positively impact the environment and surrounding communities. Core principles include:

- Material Reuse
- Ecological Restoration
- Neighborhood Renewal

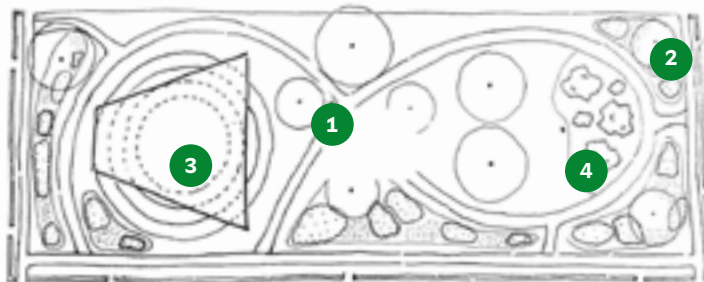
Baltimore: Vacant Houses to Vibrant Park

Researchers developed a regenerative design vision for replacing vacant houses with a new park in Baltimore. Proposed design elements included:

- Integrating natural play materials and using native plants in rain gardens
- Converting basements of vacant houses into underground cisterns for stormwater storage
- Using crushed bricks from demolished houses to build park pathways and a covered amphitheater
- Constructing a solar stormwater pump to water plants and cool streets during heat waves.

The cooling amenities of parks can result in avoided healthcare costs during extreme heat events. These savings can be used to develop park maintenance programs that pay livable wages to residents. This helps to ensure the environmental and social sustainability of the park.

Proposed Design of McKean Park



1. **Solar-powered water pumps** from underground cisterns
2. **Native plant rain gardens** connecting to cisterns
3. **Covered amphitheater** for shade and stormwater capture
4. **Pathways & natural play materials**, such as boulders

IN A NUTSHELL

- Many communities of color suffer from high property vacancy rates in the US
- In Baltimore, vacant housing can be converted to community parks through the application of regenerative park design principles
- This approach can provide community and ecological benefits.

WHAT CAN YOUR CITY DO?

- ADVOCATE** for regenerative park projects in historically marginalized communities
- IDENTIFY** opportunities to reuse materials and existing infrastructure in park construction
- CREATE** local hiring programs for park construction and maintenance
- INVEST** avoided social service costs into more park construction.

To find out more information on regenerative park design, contact **Dr. Morgan Grove** at morgan.grove@yale.edu and **Dr. Lauren Marshall** at lmarshall@arborday.org. Case study based off Grove, M., et al. (2022). Virtuous cycles and research for a regenerative urban ecology: The case of urban wood systems in Baltimore. *Frontiers in Sustainable Cities*, 4. <https://doi.org/10.3389/frsc.2022.919783>