

*After the Flood:
Exercising Best Practices in Property Acquisition Programs and Open Space Projects*

Ashton Rohmer
Master's Candidate, 2017 | Department of City and Regional Planning
University of North Carolina – Chapel Hill

Introduction

One of the most effective tools communities have to mitigate the impacts of disasters is to relocate people and property out of hazard-prone areas. This voluntary process, often referred to as a “buyout” or property acquisition, is typically exercised in floodplains and is becoming a more common option for communities to consider, particularly those that have incurred repetitive losses from recurring flood events. While buyout programs have disadvantages – including a loss of tax base, disruptions to social ties, and exacerbating equity issues, among others – many communities have successfully removed thousands of properties from flood-prone areas and the administrative process that these communities follow is relatively well documented.^{1,2}

However, what gains little attention is what is done with the vacant land once the properties are removed. Many programs that fund buyouts require the land to remain as open space in perpetuity, which poses constraints but also opens opportunities for communities to leverage this land – which is often along rivers – to create parks, greenways, and other open space amenities that can serve as an asset to the community. Despite the advantages that quality green space can bring to a community (such as economic development potential, access to recreational opportunities, and stormwater management features, to name a few), there are few case studies that illustrate the implementation phase of purposeful green space after a buyout to guide municipalities that are considering this type of program.

Planning for and implementing green space projects can face several barriers, such as insufficient long-term financial resources, an inadequate number of technical experts and personnel needed to ensure

¹ Salvesen, D. (2003). Breaking the disaster cycle: future directions in natural hazard mitigation: voluntary buyouts as hazard mitigation: implementing buyouts.

² FEMA. (1998). Property Acquisition Handbook for Local Communities.
<https://www.fema.gov/pdf/government/grant/resources/hbfullpak.pdf>

a smooth process, equity issues that may arise in underserved neighborhoods, and community ties and the sense of place that will likely need to be restored following the buyout process. Therefore, it is critical that communities have guidance to ensure they are prepared for all the aspects of the buyout process. To gain a better understanding of the buyout and open space planning and implementation processes, an in-depth case study of Charlotte, NC was conducted. Using a review of the literature, site visits, and interviews and lectures with current city staff, Charlotte's process was explored and best management practices for transitioning vacant buyout land to purposeful open space were identified.³

Charlotte Case Study⁴

Despite the fact that Charlotte's status as a rapidly growing city in western North Carolina makes it an exciting place to live, it has also created stormwater management issues for a city with a plethora of creeks and streams. Development throughout the second half of the 20th century brought an increase in impervious surface, an expansion of the floodplain, and placed more people and property in harm's way.⁵ However, it has implemented a comprehensive floodplain management program to reduce flood risk. One particularly effective strategy has been its buyout program, which is now largely funded with local money. An important piece of Charlotte's buyout program is that the Storm Water Services department (which oversees the program) realizes that the buyout does not end with the acquisition transaction; in other words, they are committed to being permanent stewards of the land. In fact, they have worked to

³ Throughout this paper, the phrase "purposeful open space" will be used to describe land uses that serve a purpose, or those that are not merely maintained as mowed vacant lots. For example, land uses that could serve a purpose include those that integrate enhanced stormwater management features, community amenities such as parks and gardens, and serve other benefits such as improving ecological functions or providing wildlife habitats. While vacant lots can surely offer some of these features, the idea with "purposeful open space" is that the community actively manages the land for a particular function.

⁴ Information in this section was gathered during an interview the author conducted with a Storm Water Services staff member on February 6, 2017, and a class visit with Storm Water Services staff on September 23, 2016.

⁵ Schwab, J. (2010). *Hazard mitigation: Integrating best practices into planning*. American Planning Association.

transition about 25% of buyout properties to purposeful open space.⁶ Their success has come from both their planning style and implementation process, which are discussed below.

Somewhat surprisingly, Storm Water Services does not actively engage in planning far in advance; rather, they take a more flexible approach. Because the program is voluntary, it can be a risk to engage in community dialogue before buyouts happen and set expectations for plans that may not be carried out. Therefore, Storm Water Services waits to see how much land is acquired and go through different planning and public engagement processes over time to learn more about community needs.

When planning is done in advance, however, it is typically one of two varieties. The first is when a specific area that has been acquired is already part of a master plan or separate planning process, such as Charlotte Water plans or greenway plans. As the final buyout area becomes more clear, the more detailed aspects of these plans are determined through traditional planning processes with each of the respective departments that owns the plans.

The second planning approach, if a master plan does not already exist, is to carry out a planning process around the specific uses once the buyout has been completed. In some instances, Storm Water Services will meet with community members and have them contribute ideas for how they would like the area to look given the area's limitations, akin to a charrette-based design process. In other cases, where Storm Water Services has an idea of what they would like to do with the land (for example, undertake a stream restoration project), they engage with citizens about the design of the project through public meetings, but do not solicit ideas for land uses since there is already a goal in place. In a few instances, Storm Water Services has worked with a neighborhood to address specific issues that arise due to property acquisition. For example, there have been a couple of places where streets that have been abandoned have caused issues, such as dumping, that are concerning to nearby residents. Storm Water Services has in turn worked with neighborhoods to implement interim solutions to prevent unwanted uses

⁶ Ashton Rohmer, "Buy-In for Buyouts: Buyout Best Practices and Their Implications for Hazard Mitigation and Climate Change Adaptation." Carolinas Climate Resilience Conference. September 14, 2016.

on cut-off streets. Lastly, in the event that land is acquired but no needs or uses are immediately apparent, Storm Water Services will pitch an idea to the neighborhood. For example, in an area where no community needs emerged, Storm Water Services suggested that they could reforest the property and made efforts to engage the surrounding residents in a replanting initiative. To support the project, local donors contributed tree saplings and adjacent residents helped to reforest the lots.

The city is also intentional about exploring opportunities to partner with other local departments in order to more efficiently leverage assets and ensure acquisition decisions are in line with capital improvements projects and other departmental plans. For example, in one area that Storm Water Services was planning to do buyouts, they discovered that a relief sewer was planned for the neighborhood. Charlotte Water, which was managing the project, was planning to buy easements from homeowners to complete the project; instead they partnered with Storm Water Services and gave them the money they would have otherwise spent on easements to support the acquisition project. This had additional benefits for the utility because acquiring the properties outright meant they did not have to navigate around structures along the easements to build the sewer, which reduced construction costs.

Charlotte's less proactive approach to open space planning gives them the flexibility they need to ensure that projects can be implemented. However, one drawback is that there is not a systematic process to identify which properties should be transitioned from vacant land to purposeful open space. Rather, where Storm Water Services has a need, or where another government department or neighborhood has a need and voices it, that is where the attention is given. This could have equity implications, as neighborhoods with fewer resources or political savvy may not be able to advocate for the repurposing of vacant land to purposeful open space. Because low-income residents and communities of color more often lack access to quality green space,⁷ more proactively targeting open space projects in these areas could be a successful strategy to ensure city resources and efforts are distributed in areas most

⁷ Wolch, J. R., Byrne, J., & Newell, J. P. (2014). Urban green space, public health, and environmental justice: The challenge of making cities 'just green enough'. *Landscape and Urban Planning*, 125, 234-244.

in need. Also, not having a plan (or relevant data) earlier in the process could result in missed opportunities for procuring funds, not realizing partnership opportunities, lack of project momentum/interest, or not prioritizing the open space projects above other community needs that are better organized or articulated.

That being said, when engaging the public during the planning process, Storm Water Services recognizes that each neighborhood is unique and tries to tailor their approaches accordingly. For example, when Storm Water Services wanted to implement a large stormwater project in a buyout neighborhood, they approached the neighborhood with an idea for an ecological garden. Local residents noted that there was a nearby elementary school that could benefit from the garden's proximity and educational resources, and the project evolved to reflect this input.

Despite their successes in incorporating community feedback, one additional challenge is that there is no 'one stop shop' between communities and different agencies that ensures information about issues and needs for both residents and government departments is accessible in one central location. For example, in areas where Storm Water Services has not done any work in the past, they would benefit from having standardized information or a formalized checklist that provided a general picture of the community they were going to work in. This would be a helpful tool to have particularly in a city as big as Charlotte, with its many diverse neighborhoods and the many projects and programs managed by government offices. That being said, Storm Water Services staff have taken an active approach to gathering this information. For example, in one particular case when information they had did not match what they were expecting, Storm Water Services staff visited the neighborhood and spoke with residents about their experience during a recent flood event. Because of this on-the-ground information gathering, Storm Water Services was not only able to extend buyout offers to additional homeowners and remove more people and property from the floodplain, but they were also able to support the construction of a greenway and community gardens in these areas, and a two-mile long stream restoration project through one of the neighborhoods is underway which further enhances its resilience to flood risk.

Charlotte's Best Management Practices

Charlotte's efforts to reduce flood risk provide a unique case study to examine so that other communities may learn from their example. Indeed, several planning and implementation best management practices can be gleaned from Charlotte's experience:

Lifecycle responsibility. When Storm Water Services begins a property acquisition project, they recognize that their responsibility as stewards of the land is a permanent one. Furthermore, this is an expectation set with local elected officials, and indeed has become the expectation that community members have for Storm Water Services.

Contingency planning. While Storm Water Services aspires to transition all of its acquired properties to permanent local assets that produce co-benefits, they also set realistic expectations for their projects and either have alternate options or remain open to ideas offered by residents if initial plans fall through or take longer than expected.

Steady stream of local funding to support "rainy day" fund. Perhaps one of the most important factors of Charlotte's success is its steady stream of local funding for both acquisition of properties and operations and maintenance of stormwater management activities. The money generated by their stormwater management fee enables the city to act quickly after a damaging flood event so that they can give homeowners a relocation option before rebuilding begins. This also supports open space and stormwater management project planning, because if more residents are incentivized to move out of the floodplain in a particular neighborhood that has sustained significant flood damage, the likelihood of there being contiguous parcels increases. Having contiguous vacant parcels gives the city more flexibility in repurposing the land. Additionally, having financial resources available to maintain the land after acquisition – that can be coupled with funding procured through grants or other city partnerships – ensures that the city can commit to being a steward of the land and that it does not become a burden on surrounding neighborhoods.

The more (and better) information, the better. Charlotte has benefitted from its technical and staff resources, which have enabled it to gather, analyze, and synthesize data. For example, after

Hurricane Floyd, Charlotte was able to secure more than \$15 million in unexpected federal funding because the city had been able to demonstrate unmet need using data previously collected and analyzed (G. Smith and D. Cannan, class lecture, September 23, 2016). They also track the savings realized from mitigation measures that have been implemented, and identify properties that are eligible for acquisition so they can act quickly after a storm. Lastly, Charlotte uses future land use conditions to map its floodplain, which is used to regulate new development and reduce flood risk.

Synergistic opportunities. Charlotte's success would not be possible without the partnerships it has cultivated with other city departments and community stakeholders. This teamwork has been an especially powerful tool given the co-benefit projects that they have fostered. For example, working with Charlotte Water and Sewer and the local Park and Recreation Department has meant that funding streams have been optimized, staff time has been efficiently used, and opportunities have been capitalized on to create community amenities that achieve multiple objectives.

Applying Research to Practice

This case study has informed the creation of two activities that can be used by local communities to ensure a buyout is an appropriate option given their assets and constraints, and that they will be able to commit to long-term land stewardship. The first activity, designed for a target audience of all community stakeholders, has participant groups begin with identifying community assets. Then, groups are guided through sets of questions that should be considered before a municipality decides to pursue a buyout. These questions hone in on topics such as how to mitigate disproportionate impacts on underrepresented populations, how to facilitate the rehousing process for displaced residents, what resources are available to maintain the buyout land in perpetuity, and how to set realistic expectations for both elected officials and residents, to name a few.

The second activity also encourages a diverse and inclusive group of participants, and guides groups through the open space planning and implementation phase. The activity begins with a warm-up activity where groups consider what hazard mitigation and climate change adaptation measures could be integrated into open space projects. Then, groups are given scenarios and instructed to create both public

and municipal engagement strategies to gather data and assess needs and opportunities. Finally, the groups are given updated scenario information that they must use in their development of an implementation plan, which will also include information on how they decide to use the buyout land given simulated community feedback and other local government needs and constraints. These exercises, while scenario-based, can serve as a way to prepare communities for the types of discussions that they will encounter while considering buyouts as a potential mitigation and recovery strategy.

Conclusion

Charlotte has leveraged a flexible planning process and a robust implementation strategy to realize its floodplain management goals, particularly as they relate to property acquisition initiatives and repurposing the resulting open space. This has enabled the city to not only remove residents and property from hazardous areas, but has also enhanced Charlotte's ability to mitigate flood risk through additional stormwater management projects. While there are areas for improvement, Charlotte's experience provides a useful example to guide other buyout and open space planning and implementation efforts. Charlotte is fortunate in that it has extensive resources that facilitate its comprehensive floodplain management initiatives, but practices such as leveraging partnerships, pursuing multi-objective projects, contingency planning, and an appreciation for the responsibility that comes with acquiring buyout properties are all lessons learned that can be applied to a wide range of communities.

As climate change impacts intensify and precipitate a shift in thinking around where we establish and maintain communities, particularly in flood-prone and coastal areas, the issues explored throughout this paper will become increasingly prevalent. Moreover, opportunities to integrate additional hazard mitigation measures and adapt to climate change can be a way to further the benefits that buyout open space can provide. Future research should continue to analyze buyouts and apply lessons learned from successful acquisition and open space programs to community relocation decisions.

The author, Ashton Rohmer, can be reached by email at ashtonr@unc.edu or by phone at 617-866-8050.