Cole Creek Health Impact Assessment Brief:

Vacant Lots and the Health and Stability of Surrounding Neighborhoods

November 2013

Summary

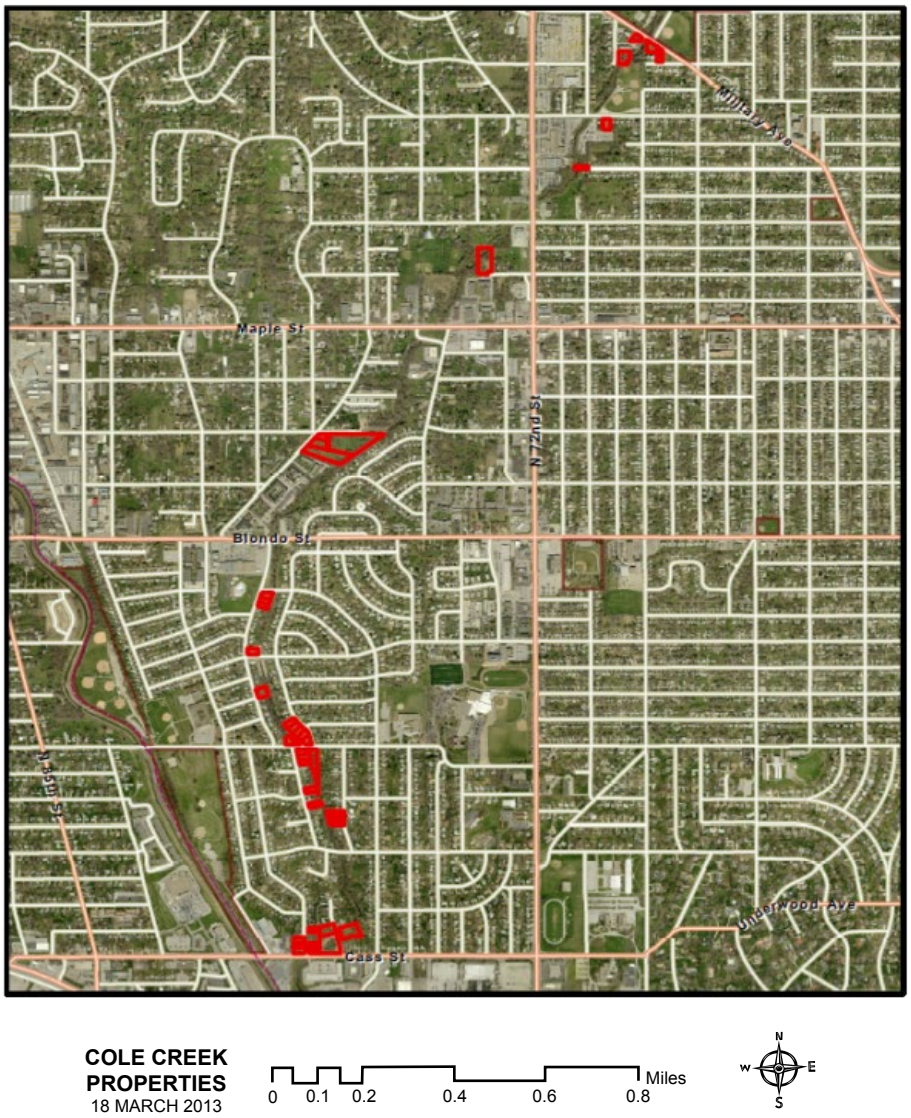
Well-maintained greenspace provides people with a way to reduce stress by spending time in nature. Vacant lots – like the 40 parcels owned by the City of Omaha along Cole Creek – can either serve as greenspace or become eyesores that undermine the health of nearby residents and the stability of the neighborhood. Recent research demonstrates the health benefits of stabilizing vacant lots using simple techniques to make them "park-like." The health of nearby residents could be improved even more by converting appropriate lots into community gardens or parks.

Cole Creek History

Along a three-mile stretch of Cole Creek from Military Ave. to Cass St., the City of Omaha has ownership of about 40 vacant lots created as part of a flood buyout and erosion control program (See Map 1). Following a severe flood in 1999 that damaged numerous properties and left one person dead, the Public Works Department began working with the Federal Emergency Management Agency (FEMA) and the Papio-Missouri Natural Resource District (NRD) to purchase and demolish at-risk houses from owners willing to sell. These voluntary buyouts continue today but at a much smaller scale due to less funding.

Ultimately, these now vacant lots became the responsibility of the Parks, Recreation, and Public Property Department (Parks). Because these properties remain in the floodway and can't be resold for housing, the Parks Department sought to determine if there were other viable uses for this land. The Douglas County Health Department agreed to assist in this effort by conducting a Health Impact Assessment (HIA) regarding how vacant land could provide a benefit to the health and well-being of the neighborhoods near Cole Creek.

Map 1: Vacant Lots Along Cole Creek



Key Research Findings

- Stabilizing vacant lots has been shown to reduce stress and increase physical activity and may also reduce crime.
- Vacant lots can be stabilized through simple measures like mowing, trash removal, planting trees, and adding fencing to deter illegal dumping.
- Vacant lots that deteriorate can harm the health of nearby residents – particularly through increased fear of crime – which can lead to neighborhood decline.
- Community gardens and parks can have additional health benefits over vacant lot stabilization. Community gardens increase fruit and vegetable consumption and social connections while parks often further increase physical activity.

The University of Washington has created a website called "Green Cities: Good Health" that organizes the 40 years worth of scientific studies on the connection between greenspace and health. It is available at http://depts.washington.edu/hhwb/.

Decision Options

The three potential approaches of the City-owned properties along Cole Creek that were researched for this HIA were: 1) stabilizing vacant lots; 2) establishing community gardens; and 3) creating new parks. These were selected because they most closely align with the mission and authority of the Parks Department and were also likely to have beneficial effects on health. The health factors considered for each option were: 1) stress (particularly from fear of crime); 2) physical activity; 3) fruit and vegetable consumption; and 4) social connections. Exposure to pests or environmental contamination also have health implications, but were not included to keep the scope of the study focused.

Stabilization Stabilization involves ensuring that a vacant lot is maintained at a sufficient level so it doesn't have a negative effect on the surrounding neighborhood. Philadelphia is the city whose approach has been the most extensive and most researched. After making the lot "park-like" by cleaning it up, planting trees and grass, and putting up a simple wooden fence to discourage dumping and illegal activities, contractors were hired to regularly mow the lots and remove trash (See Pictures 1 & 2). Researchers at the University of Pennsylvania found that residents living near vacant lots that had been stabilized felt safer, had less stress, and got more physical activity. While the researchers couldn't rule out random chance, total crimes and gun assaults also decreased in stabilized neighborhoods. Lastly, property values increased up to 30% in stabilized neighborhoods.

Community Gardens Beyond the stabilization benefits, community gardens have been shown to improve the health of nearby residents by: 1) increasing consumption of fruits and vegetables; 2) increasing moderate physical activity; and 3) increasing social connections. While this body of research is still limited, it is consistent in its findings. For example, a study by researchers at Michigan State University and the University of Michigan found that people who participated in a community garden were 3.5 times more likely to consume the recommended five servings a day of fruits and vegetables. Researchers in New York and Colorado found that by bringing people together, community gardens commonly have positive effects on other neighborhood issues such as property maintenance and litter. Another study found that property values increased by an average of $3,607 one year after a garden opens.

Park Creation Parks have long been connected to improved health and well-being. In particular, they provide:

- Reduced stress through access to nature (See "Time in Nature and Stress")
- A place for connecting with family and neighbors
- Opportunities to be physically active

While it is difficult to quantify because of differences in park quality, dozens of studies have also found that parks increase the value of nearby properties.

The biggest potential health advantage of a park over a stabilized lot or community garden is in terms of physical activity. Parks facilities can be characterized as "passive" such as picnic shelter or "active" like a playground or a soccer field. The amount of physical activity that a park generates depends heavily on how many active facilities it includes.

Pictures 1 and 2:
Philadelphia Lot Stabilization
(Before and After)

Time in Nature and Stress

Studies have repeatedly found that spending time in nature helps people recover from stress and mental fatigue. Exposure to nature lowers blood pressure, reduces cortisol levels, and improves mood and cognitive functioning. Even just viewing natural environments (by looking out a window or at a picture) has been shown to help human beings recover from stress.

This "restorative effect" has even been shown to reduce aggression and may also decrease crime. For example, scientists at the University of Illinois studied crime rates for public housing buildings under almost identical circumstances except for the amount of vegetation they had. They found that buildings with high amounts of greenery had about half the property crimes and violent crimes than buildings that were barren of plants.

Deteriorated Vacant Land & Health

Researchers have consistently found that signs of physical disorder in a neighborhood – such as when vacant land is not well-maintained – increase stress, especially the fear of crime and the feeling that personal safety is at risk. This stress itself has negative effects on health – largely by weakening the immune system.

In addition to the added stress, this increased fear has been found to have other negative health effects which include:

- Reduced physical activity because people feel less comfortable walking or exercising outdoors
- Increased use of drugs and alcohol for coping
- Increased social isolation because people withdraw from neighborhood life

Neighborhood Decline & "Broken Windows"

One particularly troubling aspect of poorly-maintained vacant land is how it can lead to a cycle of neighborhood decline. Known most commonly as "broken windows" theory, examples of physical disorder create the impression that nearby residents don't have the ability to maintain control of the neighborhood and are therefore vulnerable to criminal activity. This increased fear of crime then results in increased ambivalence about the neighborhood, the erosion of trust between residents, and decreased property values. These factors lead to more people leaving the neighborhood and more vacant land, perpetuating the downward spiral. While this pattern has been much more prevalent in cities like Philadelphia, Cleveland, and Detroit, older neighborhoods in Omaha have been impacted as well.

Current Conditions

Demographics

- The area around Cole Creek between Maple and Blondo (Census Tract 66.03) shows higher rates of poverty and instability than the other areas along Cole Creek and the city as a whole (See Table 1).
- In all three of the Census tracts examined, about 21% of the population along Cole Creek is children (age 0-14). The Maple to Benson tract had the smallest total number with 570 children nearby.
- The Douglas County Health Department has created maps that layer key factors to determine where the greatest potential for improving health exists. A large segment of the Cole Creek study area passes through areas with the highest or second highest potential for impact (See Appendix B).

Stabilization

- Grass mowed by contractors as needed – typically when 8-9 inches tall.
- Trash removal is not routinely done.
- Many of the lots have mature trees.
  - If maintained, they make the lots more park-like.
  - Fallen limbs (and even whole trees) become an issue without proper maintenance (See Picture 3)
- No fencing to deter illegal dumping.
  - Residents report that illegal dumping does occur.

Community Gardens

- No community gardens in Cole Creek study area based on the Douglas County Health Department-maintained directory.
- Nearest community gardens:
  - First United Methodist Church (.75 mile at closest)
  - Benson Community Garden (1.5 miles at closest)

Parks

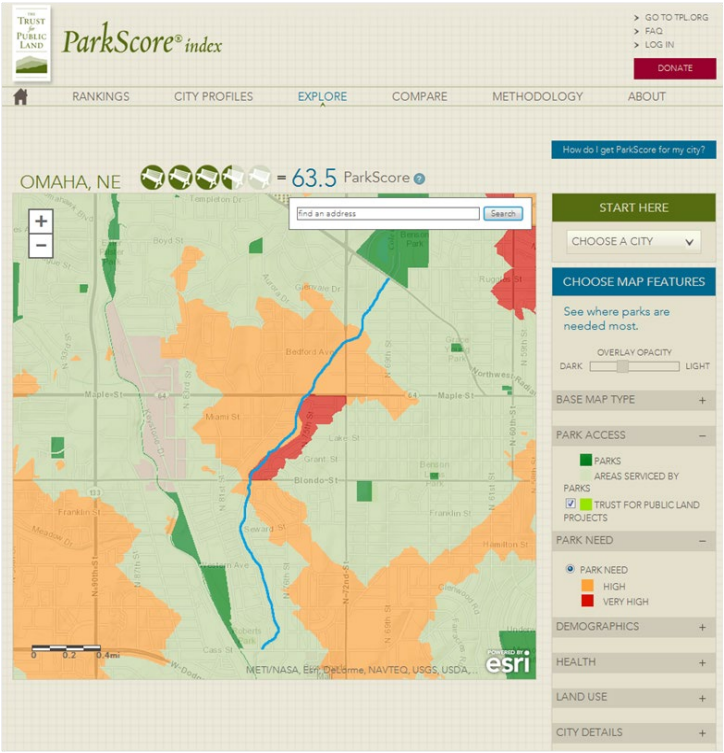
- Nearby parks exist at the beginning and end of this segment of Cole Creek but not in the middle:
  - Benson Park at the beginning
  - Roberts Park and the Keystone Trail at the end
- Trust for Public Land's ParkScore Index categorizes large parts of the middle part of Cole Creek as "High Need" or "Very High Need," based on if people have a park within a ½ mile walk from their home (See Map 2).

Table 1

	Maple to Blondo (Census Tract 66.03)	Blondo to Cass (Census Tract 66.04)	City of Omaha
Median Household Income	**$29,798**	$42,575	$46,978
Lived in a Different Residence 1 Year Ago	**41%**	17%	19%
Renter-occupied	**61%**	30%	40%
Housing Unit Vacancy	**21%**	4%	9%

Source: 2007-2011 American Community Survey 5 Year Estimates

Map 2: ParkScore Map



Picture 3: Need for Tree Maintenance

Health Impact Conclusions and Recommendations

Maintaining the stability of the 40 City-owned vacant lots along Cole Creek provides valuable greenspace and protects the health and well-being of surrounding residents – particularly by reducing unnecessary stress and the risk of a downward spiral of the neighborhood. While mowing is likely not sufficient to keep the vacant lots stable over time if trees aren't maintained and illegal dumping occurs, simple steps that have been shown to be effective – like fencing and having contractors also clean up trash – could be used along Cole Creek.

Recommendation: The City of Omaha Parks, Recreation, and Public Property Department should first prioritize ensuring the vacant lots are sufficiently stabilized so they can function as greenspace. To that end, Parks should initiate a dialogue with nearby residents to determine if illegal dumping needs to be deterred, if additional trash collection is needed, and how the City and residents could partner to achieve any additional deterrence or clean-up efforts. Two areas should be prioritized:

- *The Seward to Burt segment because it contains the largest number of parcels and has multiple boarded-up buildings next to vacant lots (See Pictures 4 & 5).*
- *The Maple to Blondo segment because the area has less stability and with more people moving in and out, illegal dumping is more likely.*

Picture 4 & 5:
Nearby Boarded-up Houses in Seward to Burt Segment

The majority of the vacant lots are already "park-like" because of their mature trees and grass, (See Picture 6) which provides some access to nature for nearby residents and will also make it easier to ensure stabilization. With sufficient neighborhood desire, creating community gardens or parks on these lots would achieve even greater benefits to the health of nearby residents and the stability of surrounding neighborhoods.

Recommendation: The creation of community gardens or parks should be one aspect of the dialogue for how the City and nearby residents can ensure the vacant lots are an asset to the Cole Creek area. Special consideration should be given in the design of any community garden or park on these lots to mitigate harm that could be caused by flooding.

For the benefit of Cole Creek and the entire city, the City of Omaha Parks, Recreation, and Public Property Department should develop formal procedures for residents to: 1) lease City-owned land to establish a community garden; and 2) request that City-owned land be designated as parkland.

Picture 6: Park-like Lots

Policy Recommendation

The City of Omaha is in need of a policy that coordinates how vacant land is put back into use. Across the U.S., other cities are developing what are commonly called land banking or "Vacant to Vibrant" policies and programs to support neighborhood stabilization and renewal. The Mayor's Office would likely be the most effective in leading such an effort across multiple city departments.

About Health Impact Assessments

The purpose of a Health Impact Assessment (HIA) is to better inform decision-makers outside of the health sector about the likely health benefits or costs of choices they are considering. HIAs are a collaborative process that brings together scientific evidence, health expertise, and stakeholder input so they can be factored into the decision-making process.

This HIA was conducted through funding from the CDC's Healthy Community Design Initiative. Current partners on HIA efforts include the **City of Omaha, the Nebraska Department of Health and Human Services, the Metropolitan Area Planning Agency,** and **Omaha by Design**.

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