



ILLEGAL DUMPING IN PITTSBURGH: Hazelwood & Hilltop Neighborhoods Study 2015 & 2016



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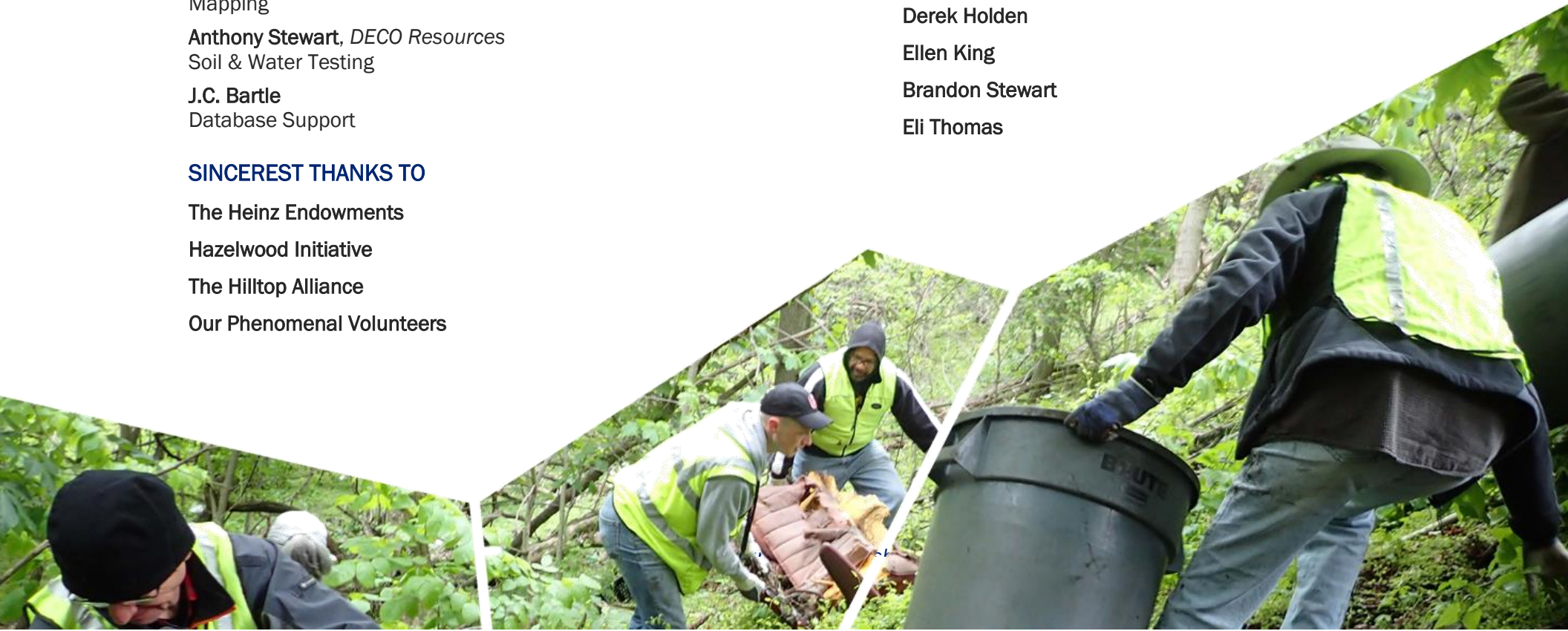
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ALLEGHENY CLEANWAYS

ILLEGAL DUMPING IN PITTSBURGH:

Hazelwood & Hilltop Neighborhoods Study

EXECUTIVE SUMMARY

Allegheny CleanWays (ACW) has been cleaning up illegal dump sites in the City of Pittsburgh and other municipalities in Allegheny County since 2000. Having identified a total of 1,207 sites and having removed more than 4 million pounds of illegally dumped debris during that time, ACW realized the critical need for a regional study that would identify the characteristics and patterns of dumping; potential public health concerns tied to items that are discarded; and practical ways to end or reduce the occurrence of illegal dumping in Pittsburgh and surrounding areas. In January of 2015, Allegheny CleanWays began such a study with funding from the Heinz Endowments. Focusing on neighborhoods representing the two most common dumping patterns of Pittsburgh, the result is *Illegal Dumping in Pittsburgh: Hazelwood and Hilltop Neighborhoods Study 2015-2016*.

During a two-year period from January 1, 2015 to December 31, 2016, Allegheny CleanWays located, thoroughly assessed, and removed dumpsites from the Hazelwood, Beltzhoover, Knoxville, and Allentown neighborhoods of Pittsburgh. The contents of the dumpsites were cataloged and the locations of the sites were mapped and analyzed. In addition, soil and water samples were taken in both Hazelwood and Beltzhoover to assess if any water or soil contamination exists at or near the sites.

The study found that three types of illegally-dumped material accounted for the largest quantities of debris removed from the sites in terms of both weight and volume - construction and demolition debris; landscaping debris; and tires. Each material poses its own set of dangers and, when coupled with the dumping patterns we found, posed health, safety, and environmental risks to the communities where the sites were located. The soil and water tests, while inconclusive regarding the direct correlation between illegal dumping and contamination, indicated enough of an initial connection to warrant further study.

Based on the findings of the study, Allegheny CleanWays made the following recommendations to the City of Pittsburgh regarding policy and procedural changes to reduce the occurrence of illegal dumping.

- Complete a comprehensive, neighborhood-by-neighborhood assessment of the entire city to better understand the scope and magnitude of the problem.
- Draft and implement a detailed vacant and abandoned properties report similar to those completed by other cities.
- Initiate an illegal dumpsite awareness campaign to make citizens and law enforcement officials aware of the problem and how to stop it, including what services the city already provides for some of the more commonly discarded items.
- Show concern for residents living in communities with high concentrations of blight by being transparent about the process and frequency of maintenance on city-owned and URA-properties.
- Properly budget for maintenance of city-owned and URA-owned properties. If lots do not become overgrown, buildings do not become dilapidated, and alleys and stairways do not become impassable, the likelihood of illegal dumping will be reduced.
- Institute a requirement to show proper disposal as part of the building and demolition permitting process.
- Work with the county and state governments to implement a state-wide waste tire manifest system.
- Install more surveillance cameras and increase city staff to properly track down and fine the increased volume of illegal dumpers caught on camera.
- Sponsor regular hard-to-recycle and household hazardous waste collections for city residents.
- Provide quarterly curbside junk collection for items that cannot normally be put in curbside trash.
- Provide subsidized dumpsters or waive recycling fees for eligible residents or small business owners who can't afford disposal fees.
- Work with the county to develop an integrated waste management system.
- Develop a neighborhood ambassador program in which small contractors, auto repair/tire shop owners, landscapers, and other neighborhood businesses would assist with educating residents about proper disposal and provide disposal services. In exchange for this service, ambassadors would receive recognition and/or added incentives such as reduction in taxes or fee waivers.

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PREFACE

This study of illegal dumping in Pittsburgh was performed by Allegheny CleanWays from January 1st, 2015 through December 31st, 2016 and was made possible through funding by the Heinz Endowments. The illegal dumping practices found in Hazelwood and Beltzhoover represent the two most common dumping patterns identified by Allegheny CleanWays. Because of this, these neighborhoods were selected to serve as models for the assessment, mitigation, and prevention of illegal dumping in the City of Pittsburgh.

ORGANIZATIONAL OVERVIEW

Allegheny CleanWays/Keep Pittsburgh Beautiful (ACW) is a 501(c)(3) nonprofit and Allegheny County's Keep America Beautiful affiliate. ACW addresses littering and illegal dumping, and the effect they have on natural and built communities, throughout Allegheny County. Littering and illegal dumping are both a form of pollution that is a chronic and costly problem in the Southwestern Pennsylvania region. It mars our scenery, contaminates our water and soil, reduces property values, impairs community health, and degrades our quality of life. Allegheny CleanWays engages residents to assist in the elimination of illegal dumping and littering through physical cleanups as well as through education, stewardship, and community partnership. Since Allegheny CleanWays began in 2000, our staff and volunteers have removed more than 4 million pounds of illegally dumped debris, including close to 30,000 tires, from the region. ACW has also educated close to 20,000 people about the harmful effects of illegally discarded debris.

PITTSBURGH HAS MADE GREAT PROGRESS IN CLEANING UP ITS GRITTY IMAGE, BUT IT HAS YET TO COMPLETELY SHED ITS DUMPING CULTURE.

ILLEGAL DUMPING

Illegal dumping occurs when a significant mass of trash is discarded unlawfully on public or private land and waterways. Illegal dumpsites can be the result of a single event, such as a renovator dumping demolition debris over a neglected hillside, or can grow over time from seemingly innocuous piles of neighborhood lawn clippings into multi-ton hotspots full of potentially hazardous materials. Unaddressed sites advertise access and attract more debris. Highly littered areas sometimes accumulate so much material it appears as if illegal dumping has occurred. The dumpsites encountered by Allegheny CleanWays are often layered with various types of material with obviously different timelines, adding complexity, difficulty, and additional safety considerations to cleanup efforts.

Southwestern Pennsylvania has a long history of illegal dumping and littering. ACW encounters many sites that are obviously decades old based on the type of material found (vintage product designs, dated debris, etc.). Glass dumps are an example of the historical acceptance of dumping practices. While other debris would be burned or otherwise disposed of, glass would often collect in piles outside. "Legacy" sites like glass dumps are often located near the foundations of former homes and are common in greenways that once had road access. These sites, once cleaned, have little chance of re-dumping and do not require much attention after initial cleanup.

Pittsburgh has made great progress in cleaning up its gritty image, but it has yet to completely shed its dumping culture. There are several factors that motivate residential and commercial dumpers. For residents, unfamiliarity with available services and convenience seem to drive dumping habits. It is common to find household trash bags and other debris collected weekly at the curb present in illegal dumpsites. Unwillingness to wait until trash day, missing trash day, or assuming large items cannot be collected at the curb are all potential causes for this frustrating trend. “Movie theater” mentality may also make illegal dumping seem more acceptable, with residents thinking that city employees are paid to clean up litter and discarded debris. For handypersons, illegal dumping is often utilized as a cost-cutting measure. Contractors, landscapers, mechanics, and other small businesses can save time and money by dumping debris over hillsides or in alleys versus paying tipping fees at legal landfills. Once cleaned, active illegal dumpsites require regular monitoring and prompt response to incidents of re-dumping so sites are not able to grow to less manageable sizes.

**ILLEGAL DUMPING AND OTHER FORMS OF BLIGHT
ARE COSTLY BURDENS TO COMMUNITIES.**

Illegal dumping damages the beauty of our communities and natural landscape, but it is not just an aesthetic concern. The practice has significant environmental, economic, and health impacts as well. Environmentally, the effects of mismanaged debris extend far beyond raccoon heads stuck in tin cans or birds entangled in fishing line. Researchers are only beginning to understand the tremendous watershed

damage done by plastics as they breakdown into food-mimicking microplastics and toxic chemical compounds. Pesticides, oil, cleaning products, and other commonly dumped household chemicals can pollute soil and be washed into streams and rivers during rain events. If organic material like feces, food waste, lawn clippings, or animal carcasses are present, illegal dumpsites can nurture dangerous microbial activity.¹ Debris that is dumped in the path of intermittent streams or storm water runoff can also interfere with drainage, causing flooding and/or increased soil erosion.

In addition to water quality issues, illegal dumping raises several other health concerns. People, especially children, are likely to be injured by hazardous materials like broken glass, twisted metal, or syringes while exploring dumpsites. Piles of debris can attract, feed, and shelter disease-carrying rodents and other pests. Nearly perfect mosquito breeding conditions are created when materials such as tires are allowed to collect standing water. Illegal dumping and litter also negatively influences mental health. A 2016 study² focused on youth living in Pittsburgh’s Homewood neighborhood found that the presence of litter and illegal dumping made residents feel stigmatized by those outside of the community. A University of Pennsylvania study³ shows that the cleaning and greening of previously blighted lots slows heart rates and reduces stress.

Illegal dumping and other forms of blight are costly burdens to communities. The Tri-COG Collaborative’s Financial Impact Analysis of Blight found that blighted properties decrease surrounding property values, cause losses in tax revenue, and increase spending on code enforcement,

¹ Bartkowiak, A., Breza-Boruta, B. & Lemanowicz, J. (2016) Assessment of the content of heavy metals and potential pathogenic microorganisms in soil under illegal dumping sites. *Environmental Earth Sciences*. 75: 1401. <http://link.springer.com/article/10.1007/s12665-016-6217-x>

² Teixeira, S., & Zuberi, A. (2016). Mapping the Racial Inequality in Place: Using Youth Perceptions to Identify Unequal Exposure to Neighborhood Environmental Hazards. *International Journal of Environmental Research and Public Health*, 13(9), 844. <http://doi.org/10.3390/ijerph13090844>

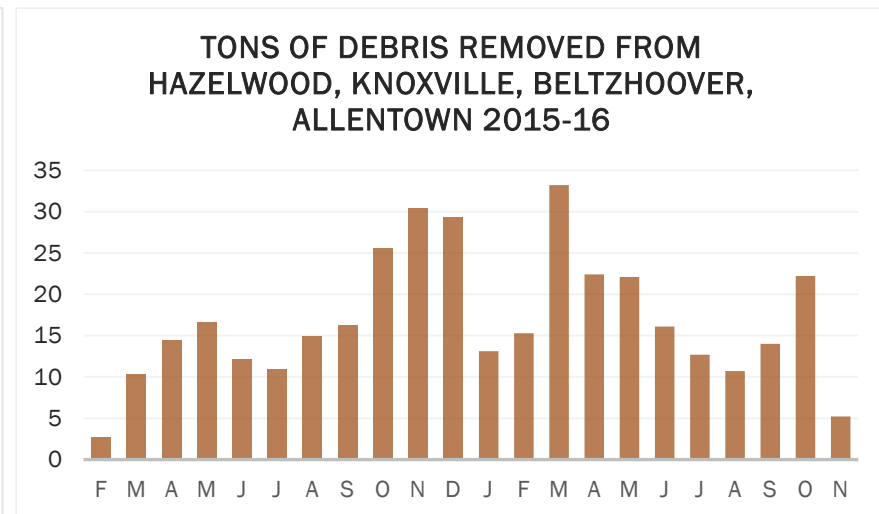
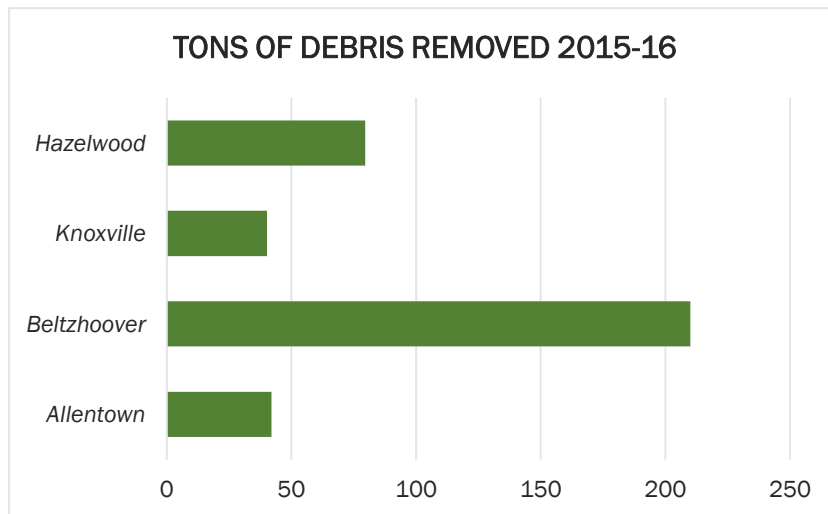
³ South, EC., Kondo, M.C., Cheney, R.A., Branas, C.C. (2015) Neighborhood blight, stress, and health: a walking trial of urban greening and ambulatory heart rate. *Am J Public Health*. 105(5):909–913. <http://ajph.aphapublications.org/doi/full/10.2105/AJPH.2014.302526>

public safety, public works, and demolition services. The study shows direct and indirect costs of blight total hundreds of millions of dollars for the 41 communities in the collaborative.⁴

CLEANUP FINDINGS

In 2015 and 2016, Allegheny CleanWays located, thoroughly assessed, and removed 66 illegal dumpsites in the Hazelwood neighborhood and 110 illegal dumpsites from the Hilltop communities of Beltzhoover, Knoxville and Allentown, responsibly disposing of more than 372 tons of illegally dumped debris. Construction and demolition (C&D) waste, landscaping debris, and tires accounted for the vast majority of both the weight and volume of the debris that was removed. These findings are not atypical and similar results are expected in comparable neighborhoods throughout Pittsburgh. Illegal dumping is a widespread and pervasive issue throughout the City of Pittsburgh’s distressed neighborhoods. Maps 1 and 2 look at this dumping from the perspective of density and distribution.

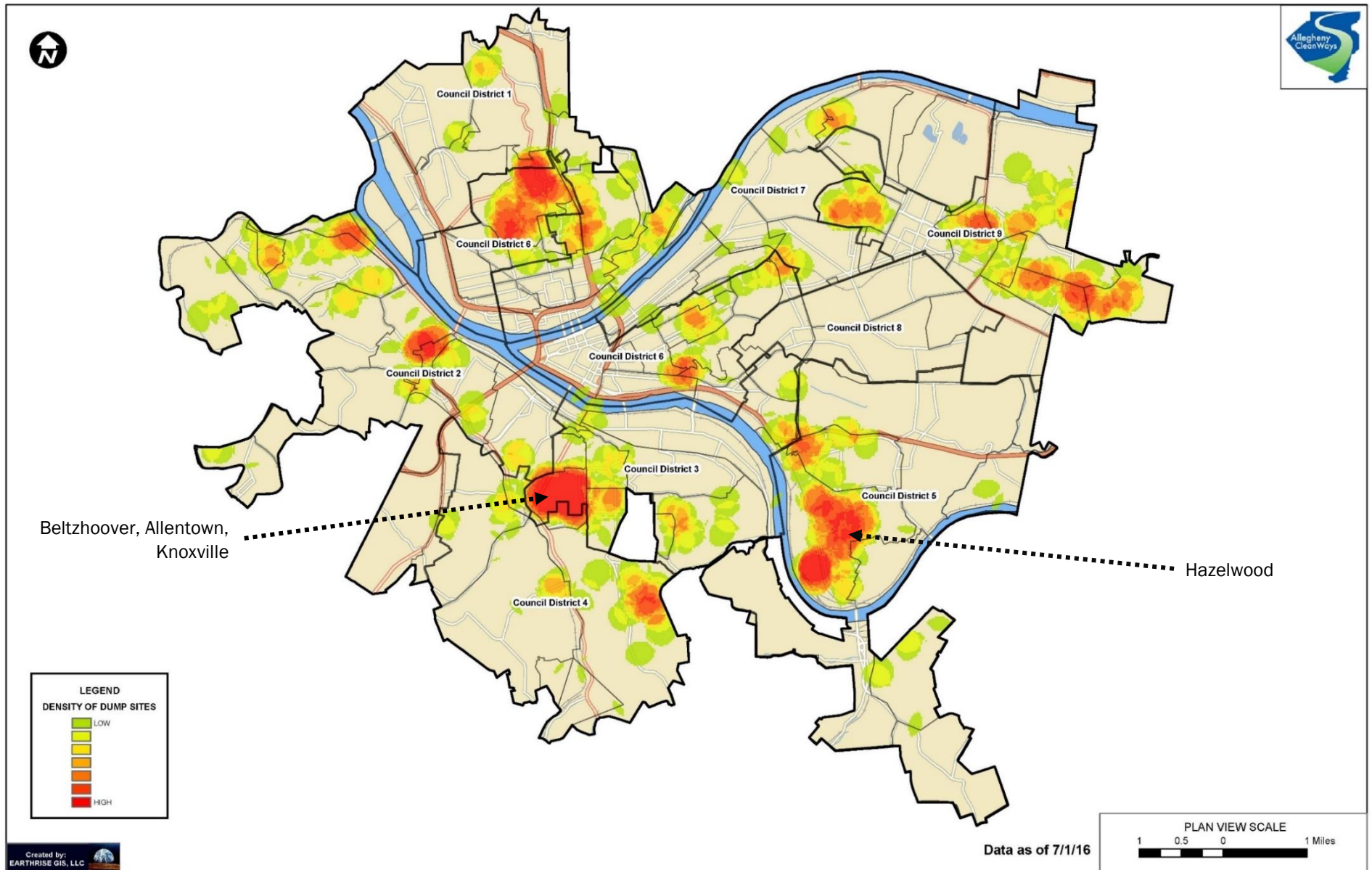
Illegal dumpsite cleanup is often intimidating for community residents to tackle alone. Without proper supervision, training, and tools, dumpsite cleanup can be unsafe- especially when dumpsites are located (as they often are) on steep slopes. Allegheny CleanWays’ DumpBusters program sends out a trained crew of 1-2 staff members and 1-3 volunteers to address illegal dumpsites of all sizes. A DumpBusters crew working with our 13-yard dump truck safely removes an average of 2000-3000 pounds of illegally dumped material from Pittsburgh’s communities each work day.



⁴ Delta Development Group, Inc. (2013) Financial Impact of Blight on the Tri-COG Communities. <http://steelriverscog.org/wp-content/uploads/2014/08/BlightImpactFullReport.pdf>

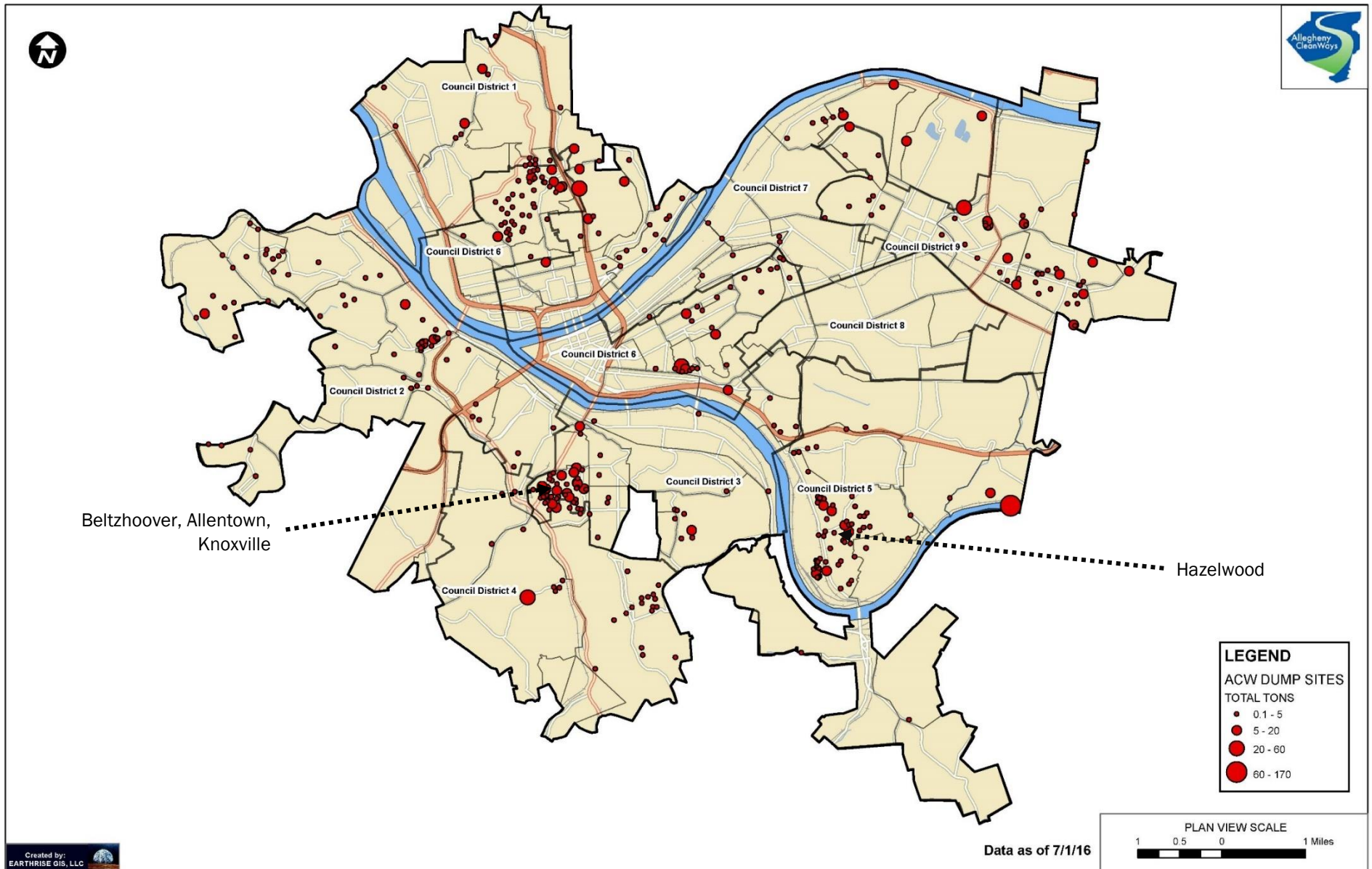
MAP 1 – City of Pittsburgh Dumpsite Density

Illegal dumping is pervasive in Pittsburgh’s distressed communities. Areas with high concentrations of illegal dumpsites also struggle with other forms of blight including litter, abandoned properties, and overgrown lots.



MAP 2 – City of Pittsburgh Dumpsite Tonnage

Illegal dumpsites are often large and should not be addressed by volunteers and community groups alone. Without proper equipment, training, and supervision, cleanup can be an intimidating, frustrating, and dangerous undertaking.

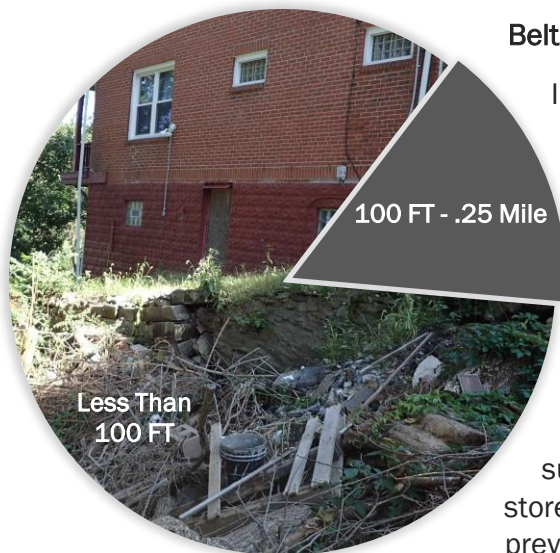


Hazelwood and Beltzhoover represent the two most common dumping patterns found in the City of Pittsburgh.

Hazelwood: Greenways

Hazelwood is surrounded by large swaths of unmaintained greenway. With road access, often hilly topography, few physical barriers in place to limit access, and low likelihood of encountering witnesses, greenways are ideal dumping grounds. Conditions are so ideal, in fact, hundreds of tons of broken roadway were dumped by the city decades ago in what is now Hazelwood's largest greenway. This is yet another example of the region's dumping culture and social acceptance of the practice. Today, Hazelwood greenways continue to be used as dumping grounds. 53 of the 66 Hazelwood sites identified and cleaned up by Allegheny CleanWays were either located in or near a greenway. The sites not located in or around greenspace were found along roadsides in flatter and more densely populated sections of the community, resembling Beltzhoover's dumping pattern.

HAZELWOOD DUMPSITE LOCATIONS



Beltzhoover, Allentown, Knoxville: Alleyways

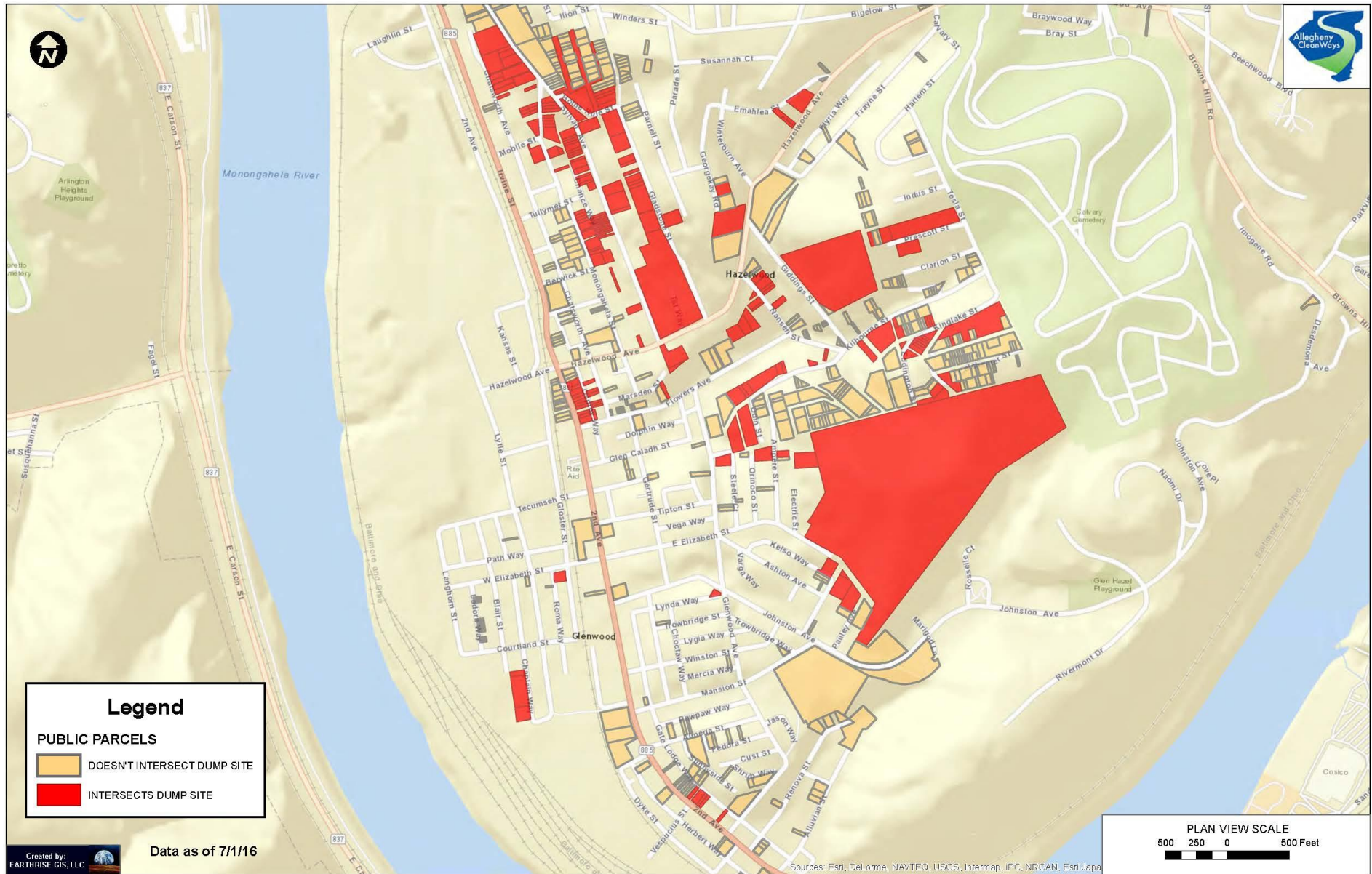
Ill-maintained alleys and roadways with heavy concentrations of abandoned, dilapidated, and overgrown properties help shape the illegal dumping pattern found in Beltzhoover and its surrounding communities. Instead of distinct sites, material is distributed along both sides, and sometimes in the middle of, whole stretches of alleyways. Using abandoned garages as dumping grounds is also a common practice in this area because of the high number of available structures. A DumpBuster crew cleaned out one such stuffed garage in August of 2015, removing 7.6 tons of renovation debris and a stashed gun case containing a loaded AK-47 and ammunition. This site was located across the street from McKinley Park's playground where a summer camp was held for over 50 children the day before the gun was discovered. Guns are often stored in abandoned properties or illegal dumpsites for easy access with lower risk of prosecution.⁵ As previously stated, illegal dumping is a crime that creates or facilitates many other public and environmental health concerns.

DUMPSITE DISTANCE FROM
BELTZHOOVER HOMES

⁵ Charles C. Branas, Michelle C. Kondo, Sean M. Murphy, Eugenia C. South, Daniel Polsky, and John M. MacDonald. (2016) Urban Blight Remediation as a Cost-Beneficial Solution to Firearm Violence. *American Journal of Public Health*. <http://ajph.aphapublications.org/doi/full/10.2105/AJPH.2016.303434>

MAP 3 – Dumpsites on Public Parcels in Hazelwood

Most of Hazelwood's illegal dumpsites were discovered on public parcels. Of the 630 public parcels (most of them greenway) in Hazelwood, 202 of them intersected with a dumpsite.



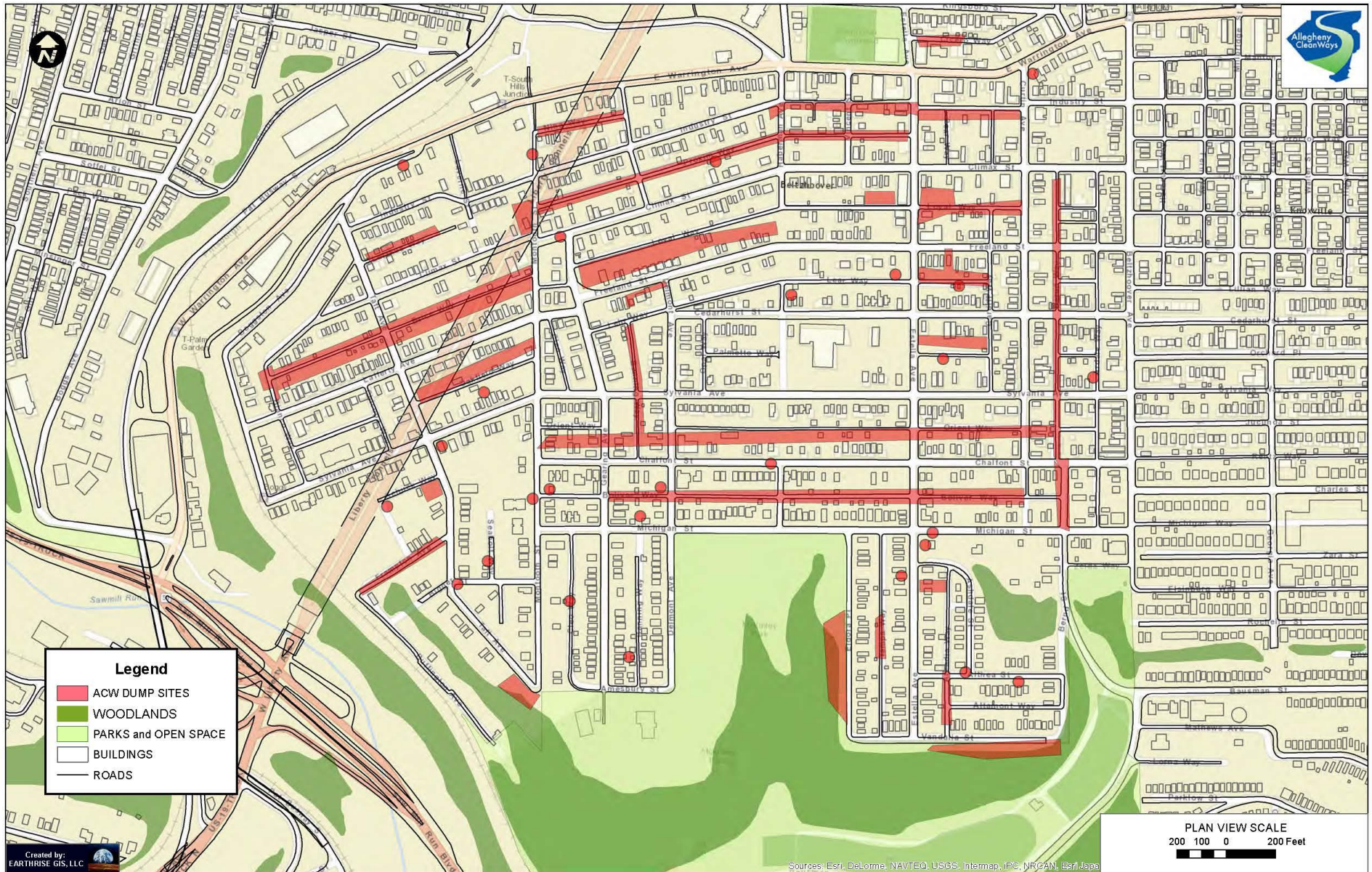
MAP 4 – Dumpsite Distribution in Hazelwood

Illegal dumping is a common practice in Hazelwood's greenways.



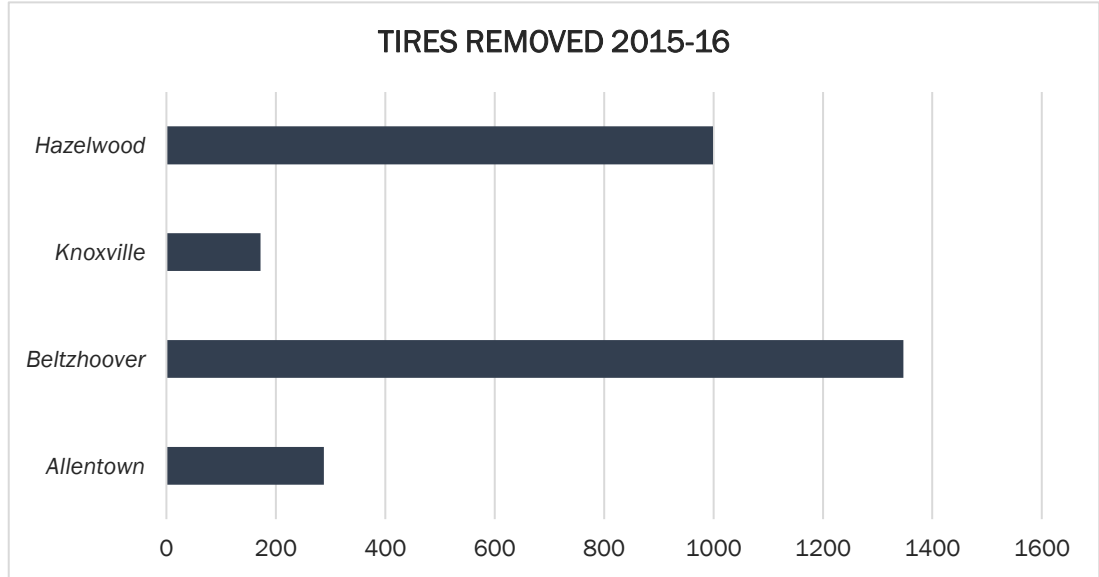
MAP 5 – Dumpsite Distribution in Beltzhoover

Illegal dumping was found within 0.25 mile of nearly every home in the Beltzhoover community. 42 of the 50 sites found in the neighborhood were located less than 100 feet from a residence.



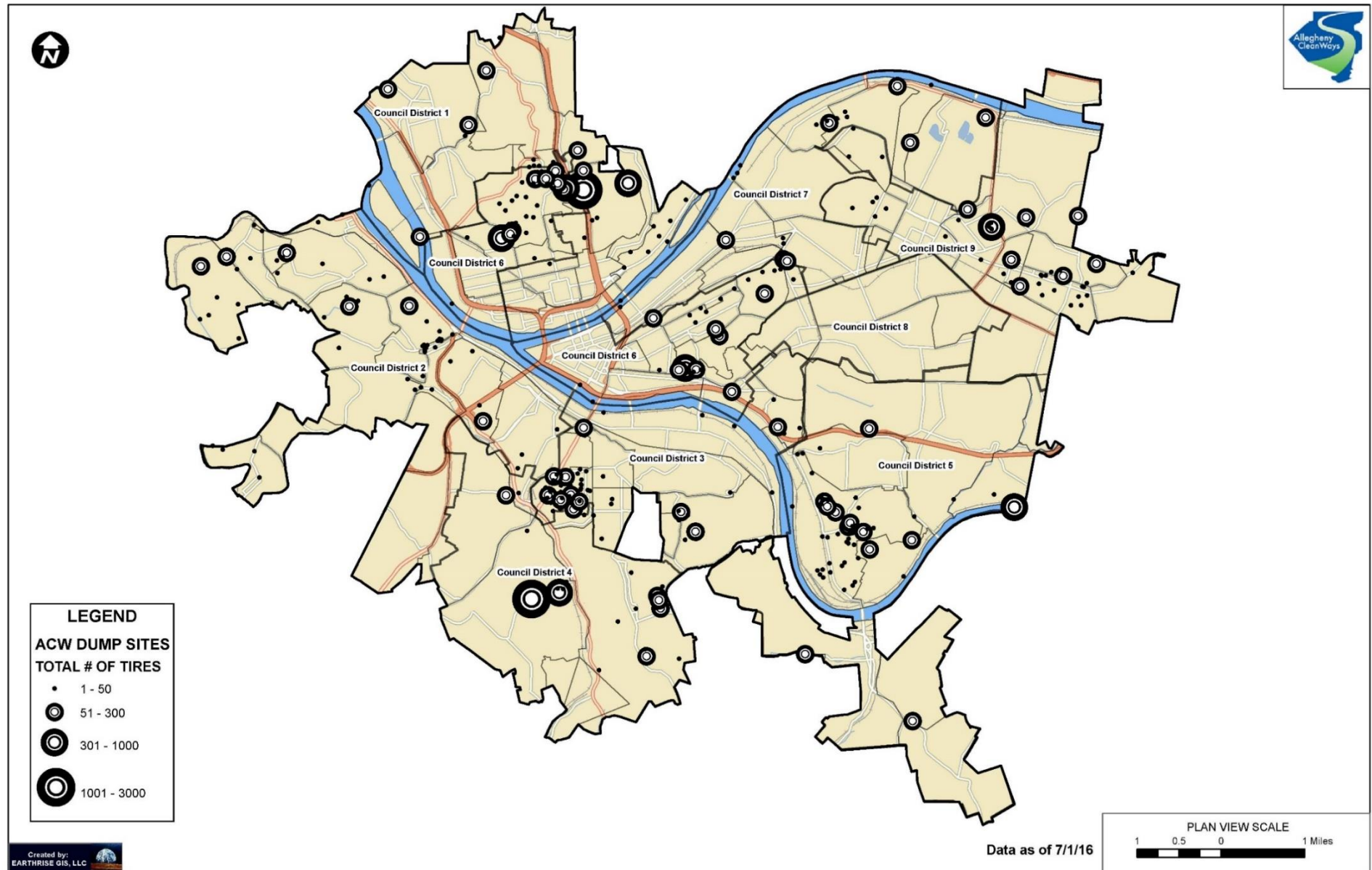
Tires:

Tires are, by far, the most discarded single item that ACW finds in illegal dumpsites, recovering an average of 3,247 tires each year. When improperly discarded and allowed to collect rainwater, tires act as excellent breeding grounds for mosquitoes. A single tire can become a nursery for thousands of mosquitoes. As mosquito-borne illnesses like West Nile and Zika become more serious concerns for our region, unmanaged mosquito incubation sites such as tires and other dumped items able to collect standing water could pose significant health risks. These risks are compounded by the fact that the highest concentrations of illegally dumped tires are found in neighborhoods with lower incomes, so residents may have limited access to healthcare. ACW removed 2,806 tires from Hazelwood, Beltzhoover, Allentown and Knoxville.



MAP 6 – Illegally Dumped Tire Distribution

Tires are one of the most commonly dumped materials in the City of Pittsburgh. When rainwater is collected and becomes stagnant, tires become ideal mosquito nurseries.





Soil and water contamination:

Legal, managed landfills have safety features and material restrictions in place to protect soil and groundwater from potential contaminants. When vacant lots, hillsides, alleys, and waterways are used as illegal landfills, these pollutants can contaminate soil, groundwater, and watersheds.

ACW hired DECO Resources, based in Allentown, to perform a pilot environmental assessment of soil and water conditions in Hazelwood and Beltzhoover. DECO collected 94 soil samples and 5 water samples total from 3 dumpsites in Hazelwood (H1, H2, and H3 on Map 7) and 3 sites in Beltzhoover (B1, B2, B3 on Map 8). The water samples were taken from standing water at 3 of the sites (H1, B1, and B2) and were tested for pH and total dissolved solids, while soil samples were tested for heavy metals.

Unsurprisingly, the soil tests found the most common contaminant in both neighborhoods to be lead. Given the manufacturing history of Pittsburgh and the widespread use of leaded paint and leaded gasoline in the last century, lead contamination of soil is common in the region. Concerning levels of arsenic were also found in Hazelwood. Arsenic is water soluble and often used as a wood preservative, so it is probable that the contamination came from the weathering of pressure treated lumber in illegally dumped construction and demolition debris.⁶

⁶ DECO Resources. (2016). Environmental Assessment.

SUMMARY OF WATER AND SOIL TEST RESULTS

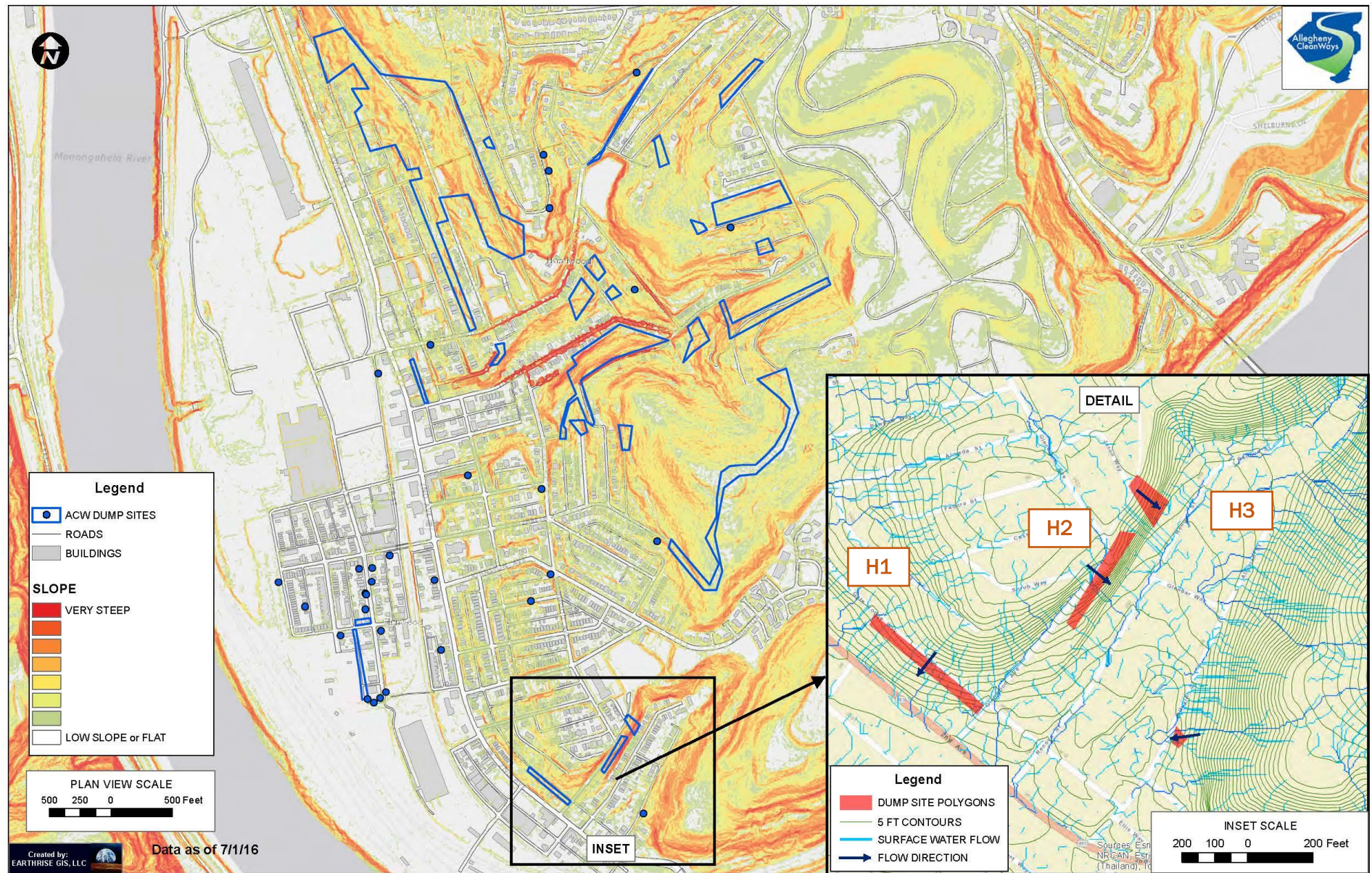
Site	Topography of site	Amount of debris removed	Description of debris found at site	Water Samples		Soil Samples			
				pH	TDS	As	Cd	Pb	Zinc
H1	Moderately steep	2.2 tons	Mostly construction and demolition (C&D)	Slightly acidic	Normal	Elevated	0	Elevated	Normal
H2	Steep	2.2 tons	Mostly household trash and C&D, some tires			Normal	0	Elevated	Normal
H3	Moderately steep	1.7 tons	Mostly household trash, vegetation debris and tires; some C&D			Elevated	0	Elevated	Normal
B1	Moderately steep	3 tons	Mixed – household, car parts, tires, and metal	Acidic	Elevated	Normal	0	Normal	Normal
B1XX	Localized sample from soil near battery found on site		Car battery			Normal	Elevated	Elevated	Elevated
B2	Moderately steep	2.9 tons	Mostly tires (167); some household, veg and C&D also	Acidic	Elevated	Normal	0	Elevated	Normal
B3	Steep	1.4 tons	Mostly tires; some household and C&D			Elevated	0	Elevated	Normal

While the results of the one water sample taken in Hazelwood were not alarming, those of the water samples taken in Beltzhoover were more troubling. The pH ranged from 3.5 to 4.7, which is acidic; and the TDS ranged from 738 to 1,040 ppm, which is above the maximum contaminant level. Both results indicate that the water is likely to be heavily impacted by pollutants found at the site. This is especially troubling given that these samples were taken from locations uphill from Saw Mill Run.

Considering the results of both the soil and water tests from this pilot assessment, ACW plans to continue testing soil and water from former dumpsites in the future, expanding the types of tests performed to capture more types of contaminants. While this initial assessment seems to indicate that there is at least some contamination of soil and water at illegal dumpsites, further testing will be necessary to determine a more direct correlation between illegal dumping and soil contamination.

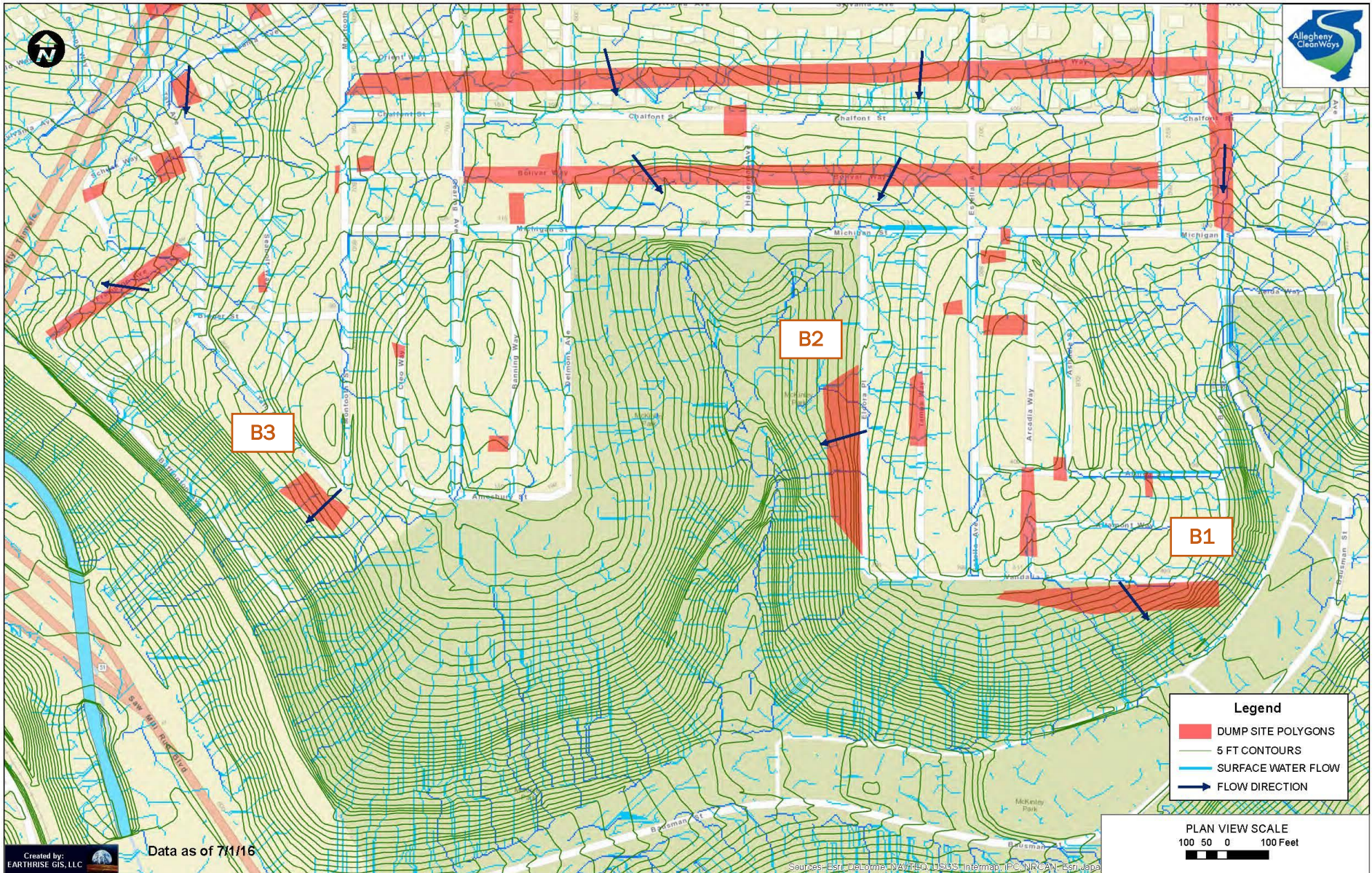
MAP 7 - Water Flow Through Dumpsites in Hazelwood

Sample sites were selected based on water flow, topography, and proximity to resident homes. Lead levels were high in soil sampled at all three test sites (H1, H2, H3). Arsenic levels were also found to be high at sites H1 and H3.



MAP 8 - Water Flow Through Dumpsites in Beltzhoover

Sample sites were selected based on water flow, topography, and proximity to resident homes. Water collected from sites B1 and B2 had an oily sheen, with trash and tires present in the water. It was found to be acidic, and is thought to be heavily impacted by the illegal dumping found on site.



RECOMMENDATIONS

Assess the problem

Unless the extent of illegal dumping is fully understood, a successful plan of action cannot be developed. A comprehensive, neighborhood-by-neighborhood assessment of the entire City of Pittsburgh will give city officials and partners a better idea how widespread illegal dumping truly is. ACW has already completed several neighborhood assessments and is currently performing an Allegheny County-wide assessment for the Allegheny County Health Department. Once the scope of the problem is understood, a detailed plan like South Bend's Vacant & Abandoned Task Force Report⁷ should be drafted and implemented. If an existing commission (like the Clean Pittsburgh Commission) cannot take on the project, a task force should be formed.

Citizen awareness of the problem should also be assessed. How many residents know illegal dumping is an issue? How many feel directly impacted by illegal dumping? Do residents know how to report an illegal dumpsite? Knowing the answers to these questions will help create targeted awareness campaigns and better serve communities with the highest concentrations of illegal dumping. Iowa Department of Natural Resources and Keep Iowa Beautiful used results from their illegal dumpsite survey⁸ to launch their "Take a Stand for Your Land"⁹ initiative.

Raise Awareness

ACW recommends that an illegal dumpsite awareness campaign like the "Take a Stand for Your Land" initiative be created for the City of Pittsburgh. Education on services already provided by the city, how to report illegal dumping, and how to get involved in cleanup efforts should be included in addition to teaching residents about the extent, impact, and health concerns of illegal dumping. Residents need to recognize, and be reminded often, that stopping illegal dumping is a priority in the City of Pittsburgh.

Increasing awareness of illegal dumping should occur at the executive and judicial level as well. Providing Environmental Law training to police officers, magistrates, and other government employees will help officials enforce illegal dumping laws and prosecute offenders.¹⁰

⁷ City of South Bend. (2013). Vacant & Abandoned Properties Task Force Report. https://www.southbendin.gov/sites/default/files/files/Code_FinalVATF_Report_2_red.pdf

⁸ Iowa Department of Natural Resources, Keep Iowa Beautiful. (2005) Illegal Dumping Follow-up Survey Results. <http://keepiowabeautiful.businesscatalyst.com/LiteratureRetrieve.aspx?ID=111749&A=SearchResult&SearchID=4347663&ObjectID=111749&ObjectType=6>

⁹ Iowa Department of Natural Resources, Keep Iowa Beautiful. (2006). Take a Stand for Your Land: A Community Guide to Combat Illegal Dumping. <https://www.iowadnr.gov/Portals/idnr/uploads/waste/idcommguide.pdfbla>

¹⁰ Keep Pennsylvania Beautiful. (2014) Illegal Dumping in Pennsylvania: A Decade of Discovery. <http://www.keeppabeautiful.org/Portals/0/PDFs/KPB%20Recommendations%20August%202014.pdf>

Take Responsibility

Those living in neighborhoods with high concentrations of vacant properties, overgrown lots, illegal dumping, and other forms of blight often feel neglected or abandoned by the city. The perception, whether valid or not, that wealthier neighborhoods get more frequent service and lower-income communities receive less is a strong, long-held view.¹¹ Transparency is required for the city to recover the trust of these residents. One suggestion is for the city to expand the GPS tracking capability of its Snow Plow Tracker¹² program to its fleet of Public Works and Environmental Services vehicles. Giving citizens the ability to check in on the frequency of service across every neighborhood may not assuage all complaints, but it will help promote and prove fair practices.

FOR EVERY \$1 INVESTED IN CLEANING AND GREENING ILLEGALLY DUMPED OR ABANDONED LAND, HOUSING WEALTH INCREASES BY \$224.

When vacant land and illegal dumpsites are cleaned and maintained, the long term benefits vastly outweigh initial costs. The Philadelphia Horticultural Society has found through their incredibly successful LandCare program that for every \$1 invested in cleaning and greening illegally dumped or abandoned land, housing wealth increases by \$224.¹³ Volunteerism and work completed by the nonprofit community is not enough to successfully solve the illegal dumping problem in Pittsburgh. The city needs to partner with organizations like Allegheny CleanWays by supporting their work both financially and programmatically. Cleanup of illegally dumped debris costs an average of \$619 per ton in Pennsylvania.¹⁴ ACW has cleaned up over 2,000 tons - \$1,238,000 worth- of illegal dumping in the past 16 years without direct financial support from the city or county governments. Management of illegal dumping, litter, and other forms of blight needs to be treated as budgeted services like police, fire, or road maintenance departments. Funding for cleanup efforts could be acquired through plastic bag or water bottle taxes. In Washington D.C., bag taxes not only raise over \$2,000,000 annually, they have also reduced the number of plastic bags used in stores.¹⁵ This is an added benefit, as plastic shopping bags are often found during litter and illegal dumpsite cleanups. After sites have been cleaned and beautified, small stewardship crews should be deployed regularly to maintain sites and address any re-dumping that occurs.

ACW HAS CLEANED UP OVER \$1,238,000 IN ILLEGALLY DUMPED MATERIAL SINCE 2000

¹¹ Teixeira, S., & Zuberi, A. (2016). Mapping the Racial Inequality in Place: Using Youth Perceptions to Identify Unequal Exposure to Neighborhood Environmental Hazards. *International Journal of Environmental Research and Public Health*, 13(9), 844. <http://doi.org/10.3390/ijerph13090844>

¹² City of Pittsburgh Snow Plow Tracker. <http://pittsburghpa.gov/snow/snow-plow-tracker>

¹³ Philadelphia Horticultural Society's LandCare Program. <http://phsonline.org/programs/landcare-program/landcare-faqs>

¹⁴ Keep Pennsylvania Beautiful. (2014). Statewide Illegal Dumping Cost Research.

[http://www.keppabeautiful.org/Portals/0/PDFs/KPB%20-%20Statewide%20Illegal%20Dumping%20Cost%20Research Final 8-20-2014.pdf](http://www.keppabeautiful.org/Portals/0/PDFs/KPB%20-%20Statewide%20Illegal%20Dumping%20Cost%20Research%20Final%208-20-2014.pdf)

¹⁵ District of Columbia Department of the Environment. <http://doee.dc.gov/bags>

Make it harder to do the wrong thing

Construction and demolition (C&D) debris accounts for the majority of illegally dumped tonnage cleaned up by ACW and seems to have at least an initial correlation to soil contamination. To help prevent dumping of C&D waste, some municipalities require a refundable deposit as part of the building or demolition permit process. The deposit is returned when presented with a weigh slip from a legal disposal facility showing that the debris has been recycled or disposed of properly.

Tires account for the most numerous single item found at dumpsites. On average, Allegheny CleanWays cleans up 3,247 illegally discarded tires annually. While many of the tires have been discarded by home owners who are unaware of free disposal options, others have clearly been dumped by commercial haulers or auto repair shops. Implementing a waste tire manifest system, like many counties and states across the country have done, provides a tracking mechanism that holds waste tire generators, haulers, and end-use facilities accountable for proper management of waste tires. The City of Pittsburgh has the opportunity to take a lead role in working with county and state governments to make such a system a reality in our region.

Surveillance cameras are useful tools in catching and convicting illegal dumpers, but only if the camera is installed in the right place at the right angle at the right time during a dumping event. Installing more cameras at illegal dumping hotspots increases the likelihood of capturing photographs that can lead to convictions. Keeping “No Dumping” signs in good condition is also important. A rusted, damaged, or missing sign makes the area appear as if it is not being monitored.

C&D WASTE, LANDSCAPING DEBRIS, AND TIRES ACCOUNT FOR THE MAJORITY OF BOTH THE WEIGHT AND VOLUME OF THE DEBRIS CLEANED UP BY ACW.

Signage and fines will not deter illegal dumpers if they are not upheld and taken seriously.¹⁶ Dumpers who are caught, charged, and released without fines or other penalties are taught that illegal dumping is not a risky offense. Those convicted of illegal dumping need to be charged a fine that outweighs the avoided cost of legitimate disposal.

¹⁶ Keep Pennsylvania Beautiful. (2014) Illegal Dumping in Pennsylvania: A Decade of Discovery. <http://www.keppabeautiful.org/Portals/0/PDFs/KPB%20Recommendations%20August%202014.pdf>

Make it easier to do the right thing

Responsibly disposing of waste that cannot be collected at the curb can be challenging, especially for community members who have limited or no access to a vehicle. Hard to recycle and household hazardous waste collections, such as ones held locally by the Pennsylvania Resources Council¹⁷, help keep some of this material out of illegal dumpsites, but they are far too infrequent and not always convenient. The city can support this work by sponsoring and promoting events. Providing quarterly curbside “junk” collection, including tires, electronics, lumber, and other hard to dispose of materials, would allow those without a vehicle to participate. Providing subsidized dumpsters or waiving recycling fees for eligible residents or small business owners would assist those who dump illegally because of being unable to afford recycling or landfill fees.

A more comprehensive, albeit more expensive, solution is to work with the county to develop an integrated waste management system similar to that implemented by Lancaster County Solid Waste Authority. Combining a comprehensive recycling program, transfer station, waste-to-energy (WTE) facility, household hazardous waste (HHW) facility and a landfill at a site just outside the City of Pittsburgh would provide area residents access to a convenient and affordable drop-off center that would take all forms of residential waste.

The City of Pittsburgh could also benefit from enlisting the help and support of small business owners, particularly contractors, auto repair/tire shops, and landscapers, to be ambassadors in each neighborhood. As ambassadors, the small business owners could help to educate residents about how to properly dispose of waste that cannot be collected curbside and/or provide services that will enable residents to dispose of the waste more easily. Ambassadors could receive both recognition (i.e. free advertising), and some sort of added incentive such as a reduction in taxes or fee waiver.

SUMMARY

Though intimidating, illegal dumping is not an impossible problem to solve. To make progress, the City of Pittsburgh and its partners need to recognize illegal dumping as a crime that happens regularly throughout the region, assess the scope of the issue, educate the public on the existence and dangers of the practice, and commit to taking the steps necessary to make cleaner streets, hillsides, and waterways a reality.

¹⁷ Pennsylvania Resources Council Hard to Recycle Collections. <http://prc.org/programs/collection-events/hard-recycle-collections/west/>

RECOMMENDATIONS FOR THE CITY OF PITTSBURGH

Assess the Problem	<i>Comprehensive assessment of all 90 Pittsburgh neighborhoods</i>
	<i>Resident surveys</i>
	<i>Create illegal dumping task force, or empower an existing group (Clean Pittsburgh Commission)</i>
Raise Awareness	<i>Create and implement illegal dumping awareness campaign</i>
	<i>Advertise services provided</i>
	<i>Hold environmental law trainings for city employees, officials, and partners</i>
Take Responsibility	<i>Municipal service transparency</i>
	<i>Financial support</i>
	<i>Plastic bag tax</i>
	<i>Stewardship crews</i>
Make it Harder to do the Wrong Thing	<i>Require weigh slips</i>
	<i>Work with county and state to implement tire manifests</i>
	<i>Install more cameras</i>
	<i>Increase illegal dumping enforcement rate</i>
Make it Easier to do the Right Thing	<i>Support hard to recycle and household hazardous waste events and work toward developing an integrated waste facility</i>
	<i>Quarterly hard to recycle curbside pickup</i>
	<i>Subsidize dumpster or recycling fees</i>
	<i>Enlist neighborhood ambassadors</i>

ALLEGHENY CLEANWAYS

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