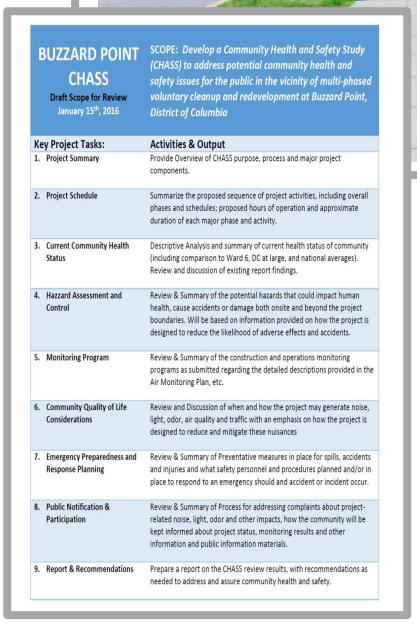

BUZZARD POINT CHASS
Draft Scope for Review
January 15th, 2016

SCOPE: *Develop a Community Health and Safety Study (CHASS) to address potential community health and safety issues for the public in the vicinity of multi-phased voluntary cleanup and redevelopment at Buzzard Point, District of Columbia*

Key Project Tasks:	Activities & Output
1. Project Summary	Provide Overview of CHASS purpose, process and major project components.
2. Project Schedule	Summarize the proposed sequence of project activities, including overall phases and schedules; proposed hours of operation and approximate duration of each major phase and activity.
3. Current Community Health Status	Descriptive Analysis and summary of current health status of community (including comparison to Ward 8, DC at large, and national averages). Review and discussion of existing report findings.
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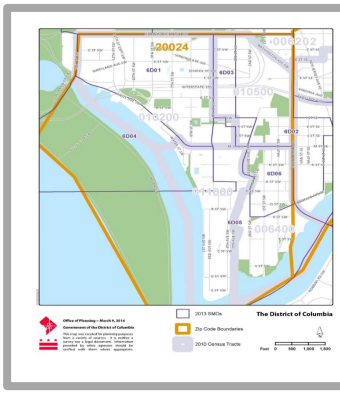

BUZZARD POINT COMMUNITY HEALTH & SAFETY STUDY (CHASS)

AUGUST 2016

District of Columbia Department of Health, Office of Health Equity

GOVERNMENT OF THE DISTRICT OF COLUMBIA
DOH
DEPARTMENT OF HEALTH
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Acknowledgments

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With special thanks to:

Advisory Neighborhood Commission Ward 6D (ANC 6D)

Executive Office of the Mayor (EOM)

Community Stakeholders

DC United

Pepco

Metropolitan Police Department (MPD)

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This report is available online at: http://doh.dc.gov/page/office-of-health-equity

Contents

CHASS Executive Summary

The Department of Health has developed this Community Health and Safety Study (CHASS) to address potential health and safety issues for the residential community in the vicinity of the multi-phased voluntary cleanup and redevelopment of Buzzard Point, District of Columbia.

Buzzard Point is a peninsula in the south western quadrant of the District of Columbia, nestled between the Anacostia River (south and east) and the Washington Channel, which parallels the Potomac River (to the west). The CHASS process and this report, defined a **Buzzard Point Community Health Status (CHS) Assessment Area** that approximates the 20024 zip code. This is because much of the available community health, socio-economic and demographic data relate to this geography, and provides the best opportunity for comparability with the rest of the District. However, this report also recognizes a more refined area embraced by the Buzzard Point residents and community, as their residential neighborhood defined within the area of M St. SW, to the north; South Capitol St. SW, to the east; Potomac Avenue to the south; and 2nd St., Canal St., and Delaware Avenue SW, to the west. This definition of the neighborhood approximates U.S. Census Tract 64.

The CHASS process has been undertaken in partial response to resident concerns primarily with respect to health issues associated with redevelopment in Buzzard Point, that include the potential health risks for the surrounding community. Also expressed are concerns regarding impacts to environmental resources, the potential for increased risk of displacement and property rezoning, impacts on traffic levels and transit accessibility, and the diversion of public dollars from the Buzzard Point community. While this broad range of community concerns is summarized in Part 1 of this report, its documentation is primarily to describe the broader context for this report in recognition of their importance from a resident and community perspective.

The principle focus of this CHASS is to provide a descriptive analysis of current health status of the Buzzard Point community, including comparisons with the District as a whole as presented in Part 3. Similarly, Part 2 of this report outlines the broader redevelopment context as currently proposed for the Buzzard Point area that includes a total of five (5) key projects. However, the detailed review and description presented in Part 2 is more narrowly focused on just one project – the DC United Soccer Stadium. This project, including the associated voluntary cleanup program, provides a useful starting point and opportunity for understanding the range of community health and safety issues generated by the complexity of this individual proposal, a summary of the detailed plans submitted for approval, the review processes, as well as consideration of the appropriateness of the technical and monitoring response, essential to assure community health and safety.

Within the **Buzzard Point Community Health Status (CHS) Assessment Area** as defined, the discussion of community health status in Part 3, utilized data available primarily at the zip code and census tract levels, and includes selected demographics, socio-demographic composition, as well as key health outcomes measures.

The discussion of contemporary economic and social data for the **CHS Assessment Area** as a whole, which like the health outcomes data was based on the zip code 20024, presented a picture that was for the most part, remarkably similar to the District of Columbia as a whole. More dramatic differences are observable however, in terms of social wellbeing for residents in U.S. Census Tract 64, which approximates the resident-defined Buzzard Point Neighborhood, and underscores the elevated historic and contemporary vulnerability of Buzzard Point Neighborhood residents by comparison both with their immediate neighbors on the rest of the Peninsula, as well as with that of the District of Columbia as a whole. Average family income in the neighborhood (Census Tract 64, 2010-2014) was $32,074; unemployment was 18%; family poverty 47%; children in poverty 47%; and senior poverty 31% -- *all significantly higher than that for other census tracts in the immediate vicinity, and as compared with the District as a whole.*

Health Outcomes data sources for the **Buzzard Point CHS Assessment Area** include the Behavioral Risk Factor and Surveillance System (BRFSS) 2013; Hospital Discharge Data (2013-2014); Childhood Blood Lead Levels (2016); and DOH Vital Records Mortality Data on Leading Causes of Death (2014). Unlike the socioeconomic data referenced above, comparable small area health outcomes data are not available.

Overall, the review of health outcomes data show that in general, the population within the **CHS Assessment Area** (20024 zip code) has a health status, as measured by health outcomes that are similar to that of the District of Columbia, when compared for several indicators. However, by some measures, there were slight differences. Although the top five causes of death for the District in general and those for the Buzzard Point area were similar, the data show higher death rates for diseases of the heart and cancer in Buzzard Point than across the District.

These differences are based, however, on very small numbers or case counts, which in many instances consisted of less than a total of 20 cases over five years. Therefore, while the data and analysis based on these rates might suggest some cancer incidence and mortality trends, as well as lower-respiratory disease rates that appear to run counter to District trends, we conclude that there are no statistically-significant elevations of cancer or other health conditions within the **Buzzard Point Community Health Status (CHS) Assessment Area** compared to the rest of the District of Columbia.

Part 4 through Part 8 of this CHASS Report begin the process of outlining the essential components of a formal Community Health and Safety Plan, based on what is currently available relative to the DC United Soccer Stadium project only. It should be noted, however, that to date many of these plans have not been finalized, but rather, are at various stages of review by the relevant regulatory agencies. They are included in this report at this stage, as illustrative of the process underway, primarily to improve understanding and transparency. Monitoring processes are scheduled to occur during excavation, construction and beyond (e.g., monitoring wells). These include specific response protocols and actions if exceedances of established limits occur. This is essential with respect to air, water and sediment controls.

In conclusion, the following five (5) recommendations are made in Part 9 of this CHASS Report. While as noted earlier, the data on health outcomes do not indicate statistically significant elevations of cancer or other health risks, it is also not possible to make a definitive determination of cause and effect for health outcomes observed in surveillance data. Recommendation number 5 below therefore specifies continued monitoring of community health status through the construction period. Specifically, this recommendation as detailed in Part 9, specifies that monitoring of health outcomes related to asthma, acute respiratory diseases, heart disease and stroke be addressed.

As noted above, the societal data are suggestive of social vulnerabilities with respect to the Buzzard Point neighborhood. They are indicative of the potential absence of protective factors essential to community resilience, in the face of extended physical and social disruption generated by perpetual construction during multi-year, multi-phased redevelopment activity. In order to mitigate against the potential and/or cumulative impact of less tangible -- but real -- social determinant of health stressors that might be faced by especially vulnerable residents, the District must redouble its efforts to minimize impacts, especially dust, during construction, in order to assure community health and safety.

Where appropriate, the five overarching recommendations are presented with respect to both immediate needs, as well as longer-term proposals for consideration. Immediate improvements are essential in order to protect the demonstrable vulnerable current resident population, especially those residing in the south-eastern quadrant of the peninsula. These include improved program coordination and management of public and private multi-year redevelopment projects; enhanced community engagement practices that are proactive, regularly convened, updated and sustained. Close attention to monitoring and enforcement of existing permits, regulations and policies will be especially critical during the extended multi-year project implementation and construction period, and beyond.

Earning community trust through proactive engagement, timely notification, and exemplary enforcement will go a long way. Investment in these priorities are critical to the protection and assurance of residents and neighborhoods with respect to community health and safety in the vicinity of Buzzard Point.

Recommendations:

1. **Improved program coordination, to include all project components and construction projects to minimize impacts on the community.**
2. **Enhanced community engagement and notification with respect to program and project developments through regularly scheduled public meetings.**
3. **Provide for proactive development of prevention and control measures, as well as enforcement of policies and regulations to control dust and improve air quality.**
4. **Develop ongoing field monitoring of soil, water and air quality.**
5. **Conduct continued monitoring of Community Health Status through the construction period.**

Part 1: CHASS Project Summary Overview & Context

The purpose of this section it to present an outline of the Community Health and Safety Study (CHASS) process; provide a summary of the methods utilized, including limitations; as well as a summary of the major components of this report. The section immediately following defines the scope, outline, and the definition of the Buzzard Point Community Health Status (CHS) Assessment Area. This is followed by an overview of the CHASS context, in terms of resident definition of their neighborhood, as well as a summary of concerns from the resident perspective.

CHASS Scope: Develop a Community Health and Safety Study (CHASS) to address potential community health and safety issues for the public in the vicinity of multi-phased voluntary cleanup and redevelopment of Buzzard Point, District Columbia.

CHASS Outline: The outline of this Community Health and Safety Study Report follows the draft "Buzzard Point CHASS Scope" - dated January 15th, 2016; which was shared and accepted at a consultative stakeholder meeting of the same date; and confirmed at the following public meeting, on January 21st, 2016. (See Figure 1.1 below & ***Appendix 1*** for larger version*)*

BUZZARD POINT CHASS **Draft Scope for Review** **January 15th, 2016**	SCOPE: ***Develop a Community Health and Safety Study (CHASS) to address potential community health and safety issues for the public in the vicinity of multi-phased voluntary cleanup and redevelopment at Buzzard Point, District of Columbia***
Key Project Tasks:	**Activities & Output**
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9. **Report & Recommendations**	Prepare a report on the CHASS review results, with recommendations as needed to address and assure community health and safety.

Figure 1.1: Buzzard Point Community Health and Safety Study (CHASS) Scope

CHASS Buzzard Point Community Health Status (CHS) Assessment Area: For the purpose of this CHASS process and report, a *Buzzard Point Community Health Status (CHS) Assessment Area* has been defined, which is bounded by M Street, SW to the north; South Capitol Street SW to the east; the Anacostia River to the south; and the Washington Channel to the west. This definition makes sense here, because much of the community health, and sociodemographic and economic data relate to this geography, and provides the best opportunity for comparability. The **CHS Assessment Area** approximates the 20024 ZIP code – as shown in Figure 1.2 below. This geography also approximates a total of four (4) U.S. census tracts – CT102; 105; 110 and 064 – which facilitates more local analysis and comparisons *(see **Appendix 2** for larger version*).

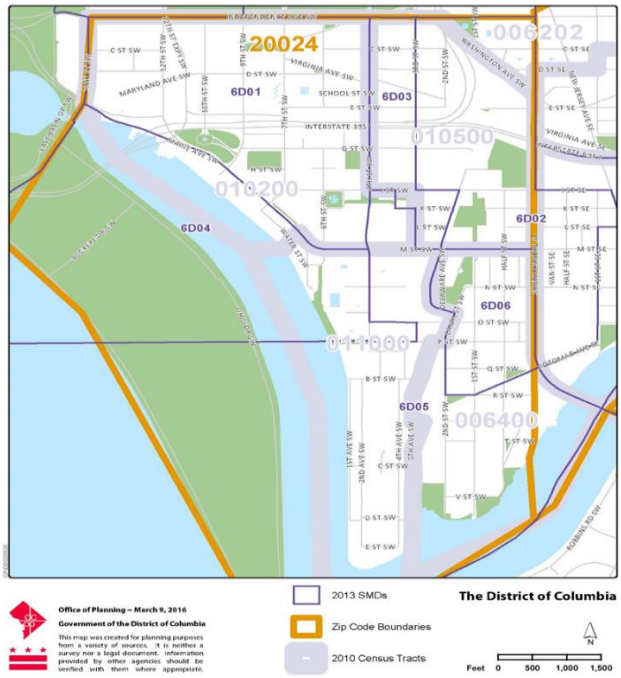


Figure 1.2: Buzzard Point Community Health Status (CHS) Assessment Area

Buzzard Point Local & Neighborhood Context:

Geographically, Buzzard Point is a peninsula in the southwestern quadrant of the District of Columbia, nestled between the Anacostia River (south and east) and the Washington Channel, which parallels the Potomac River (to the west). Much of the land area of the peninsula has served as the longtime home to a United States Army Post, Fort McNair to the west, and often times referred to as "Greenleaf Point". The eastern half of the peninsula has for decades been characterized mostly as industrial, with the notable development of the Pepco art deco styled power station having been constructed near the southern tip of Buzzard Point back in the early 1930's. Industrial and commercial facilities to the east include a concrete processing plant, and until recently, scrap yards that have been at the location since the 1950's, amongst other uses.

Figure 1.3 Buzzard Point Peninsula - Cultural Assets
(Note: Blue Circle is resident-defined Buzzard Point Neighborhood location)

From a resident perspective, the Buzzard Point neighborhood is a much smaller area, located towards the upper northern limits of the peninsula bounded by M St. SW, and west of South Capitol St. SW., as indicated in Figures 1.3 above. As detailed in Figure 1.4 below, the resident-defined neighborhood is bounded by M St. SW, to the north; South Capitol St. SW, to the east; Potomac Avenue to the south; and 2nd St., Canal St., and Delaware Avenue SW, to the west. Per the U.S. Census, the neighborhood population for this location was 1,986 from 2010-2014. Notably, this self-definition is distinct from the neighborhood to the immediate west, and north of Fort McNair, better known as Waterfront.

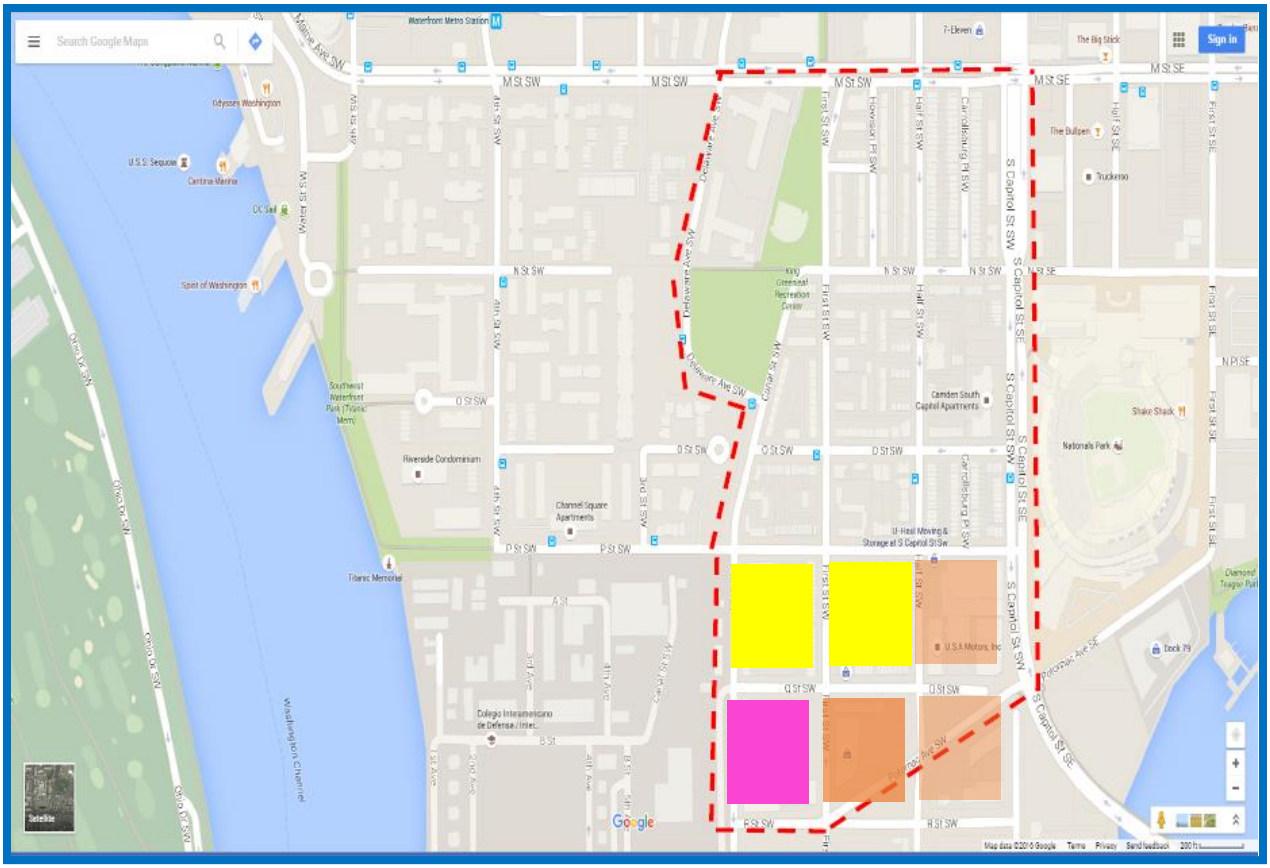


Figure 1.4 – Resident Defined Buzzard Point Neighborhood

KEY: = *Approximate Boundaries*

Blocks - Primary Existing Land Use: = *Commercial;* = *Industrial;* *Residential*

Considered together, the Buzzard Point and Waterfront neighborhoods include an estimated 3,728 housing units south of M Street SW and west of South Capitol St, amongst these are a total of 906 public housing units. Approximately one-third, or 80, of the 239 total James Creek public housing units are located within the Buzzard Point study area (the James Creek units

border P Street, and therefore some are units are within the study area while others are outside the study area).[1]

The map of existing land use ***(see Appendix 5)*** shows that the majority of the resident-defined Buzzard Point Neighborhood is currently residential. There are many commercial, industrial and public/quasi-public uses within the defined neighborhood boundary. This is especially true for the four blocks towards the southern boundary, immediately north of Potomac Ave., which are almost exclusively industrial and commercial. These four blocks are shaded pink and orange on Figure 1.4 above. The block bounded by 1st Street; Q Street; and Half Street (dark orange shade) has a small residential presence facing north on Q Street. The two blocks (shaded yellow), at 2nd Street; P Street; Half Street; and Q Street are the reverse. They are predominantly residential, with some commercial and industrial uses on the blocks.

As will be detailed in the next section, the geographic area defined as the **"Buzzard Point Redevelopment Area"** excludes Fort McNair, as well as the Waterfront Neighborhood to its immediate north. It also splits the resident-defined Buzzard Point Neighborhood, setting its northern boundary at P Street SW. (Please see ***Appendix 4,*** for larger Buzzard Point Redevelopment Area context map).

Summary of Resident & Community Concerns

The concerns of the Buzzard Point community have been communicated and documented in several ways. Public outreach campaigns and meetings were held by both public and private entities, reaching out to the Advisory Neighborhood Commission Ward 6D (ANC6D), community stakeholders as well as the community at large.

> *Specifically, residents are concerned that their "already vulnerable community—home to many children, seniors, and many residents with fragile health—will be further threatened by the trucking of contaminated soil, dust, construction traffic, noise, and other disturbances."*

The Advisory Neighborhood Commission Ward 6D
The ANC6D have expressed concerns both verbally and formally over the site remediation and public improvements with regards to the potential health risks of the surrounding community, especially those increased by exposure to electromagnetic (EMF) radiation (new Pepco substation) as well as hazardous materials and/or dust that could travel from the construction site to the adjacent community. Additionally, the ANC6D questioned how the proposed stadium would affect residents of public and subsidized housing, the increased risk of displacement as development continues, how information about the project would be communicated to the community and a request that best management practices are used to address all concerns.[2]

[1] Buzzard Point Urban Design Framework Summary (OP/DMPED)
[2] Buzzard Point Environmental Mitigation Study http://dmped.dc.gov/node/1104512 Retrieved March 23, 2016

Community Stakeholders
Additional concerns of key stakeholders included the potential impacts to environmental resources such as the impact on the water quality of the Anacostia River, soil contamination of the site and the potential of contaminants to travel to the neighboring community, as well as property rezoning and displacement, community cohesion, traffic levels, transit accessibility, and diversion of public dollars from schools and libraries.

Buzzard Point Community at-large
Community members have communicated concern over: the potential for hazardous materials at the site; the demolition of existing sites and construction of the stadium; the new Waterfront Substation being constructed; the cumulative effects of both living adjacent to a highway and the proposed multiyear project with regards to air, noise pollution and increased traffic; the likelihood of increased difficulty in parking and driving in the area; the need to preserve affordable housing; and the need for the stadium project to be considered in context with numerous other plans.

A summary of community concerns can be characterized as falling within three domains; Community Health; Quality of Life; and effects on the Physical Environment. Each might also be understood as having differential effects, depending on the phase or timeframe, moving from the existing state; through pre-redevelopment, including demolition, voluntary cleanup and remediation; during redevelopment and construct; and finally post-development phases, as summarized in Table 1.1 below.

	Summary of Community Concerns		
TIMEFRAMES:	**Community Health**	**Quality of Life**	**Physical Environment**
Existing State	• Chronic Disease • Environmental Conditions & Risks • Rodent Control • Air Quality	• Socioeconomic Status • Jobs	• Remediation of Potential Hazards • Housing Quality • Protection of Historic Resources • Water and River Impacts
Pre-Redevelopment	• Remediation • Rodent Control • Air Quality	• Noise • Construction Traffic • Pedestrian Safety • Dust	• Preservation and Availability of Affordable Housing • Streetscape/Sidewalk • Water and River Impacts
During Construction	• Remediation • Rodent Control • Air Quality	• Noise • Construction Traffic • Lighting • Pedestrian Safety • Dust	• Preservation and Availability of Affordable Housing • Water and River Impacts
Post-Development	• Air Quality	• Noise • Traffic Congestion • Parking Supply & Demand • Increased Pedestrian Activity • Multiple Stadium Events	• Preservation and Availability of Affordable Housing

Table 1.1: Buzzard Point Neighborhood & Community Concerns

The broad range of community concerns summarized above are an important part of the broader context for this report. The principle focus of this CHASS, however, is to provide a descriptive analysis of current health status of the Buzzard Point community, including comparisons with the District of Columbia as a whole.

Based on the January 2016 Buzzard Point Community Health and Safety Study (CHASS) Scope, the purpose of this CHASS Report is to provide a community friendly:

1. Summary of the proposed sequence of project activities including phases, schedules, hours of work ***(Part 2)***
2. Descriptive analysis of current health status of the Buzzard Point community, including comparisons with Ward 6, the District, and national averages ***(Part 3)***
3. Summary of potential hazards that could impact human health, cause accidents or damage – both onsite and beyond project boundaries ***(Part 4)***
4. Summary of the construction and operations monitoring programs provided in the soil, water and air monitoring plans ***(Part 5)***
5. Review and discussion of how and when the project may generate noise, light, odor and traffic, highlighting project procedures to reduce nuisances ***(Part 6)***
6. Develop a resident directory for addressing complaints about project-related noise, light, odor and other impacts; including how community will be informed of project status updates ***(Part 7)***
7. Summary of preventative measures in place for spills, accidents and injuries, and safety measures and procedures to respond to emergencies should accidents occur ***(Part 8)***
8. Recommendations as needed to address and assure community health and safety ***(Part 9)***

CHASS Process & Methods:

This CHASS Report is the result of a review of previously commissioned reports, studies and analyses submitted to regulatory agencies for approval to date, as well as other supporting documents and input from subject matter experts. Over the course of several months, documents—as detailed below and graphically presented in Figure 1.5—were requested and reviewed, and then summarized in this Report. Data on Community Health was also gathered, and is summarized in Part 3. All District of Columbia documents related to Buzzard Point Redevelopment, and plans related to development of the DC United Stadium, can be found on line at http://dccouncil.us/pages/soccer-stadium-development-documents.

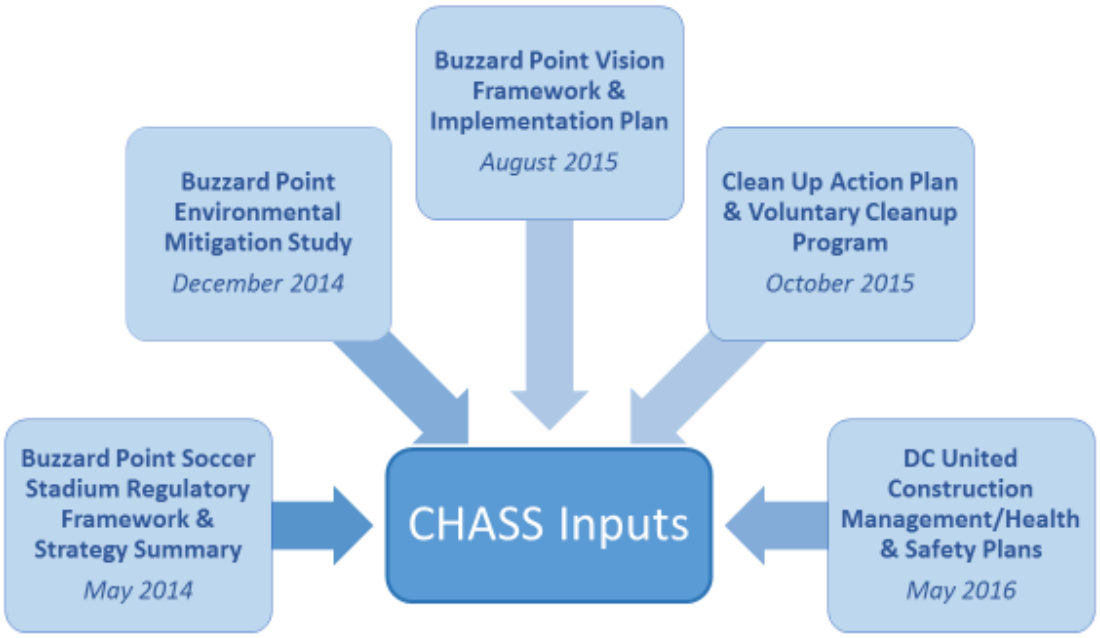


Figure 1.5: CHASS Process Inputs

The key documents used for this CHASS study and electronic links (URL's) are provided below:

- Buzzard Point Soccer Stadium Regulatory Framework and Strategy Summary ***(May, 2014)***
  http://lims.dccouncil.us/Download/31817/B20-0805-Revised-Summary-Considerations19.pdf
- Buzzard Point Environmental Mitigation Study ***(December 2014)***
  http://dmped.dc.gov/node/1104512
- Buzzard Point Vision Framework and Implementation Plan ***(August 2015)***
  http://dmped.dc.gov/node/1104412
- Executive Summary Revised Cleanup Action Plan, Voluntary Cleanup Program, Buzzard Point DC United Soccer Stadium Development Washington DC ***(October 2015)***
  http://dmped.dc.gov/sites/default/files/dc/sites/dmped/page_content/attachments/Revised%20Cleanup%20Action%20Plan%20ExecutiveSummary%20(10-13-15).pdf
- DC United Construction Management and Health & Safety Plans ***(May, 2016)***
  http://dmped.dc.gov/sites/default/files/dc/sites/dmped/page_content/attachments/Public%20Meeting%20-%20DC%20United%20Soccer%20Stadium%20Remediation%20Presentation%20(Final%20-%20012116).pdf

CHASS Limitations:

The goal of **Community Health and Safety Plans (CHAS*Plans*)** is to provide a lay person's guide; that is, a user friendly and easy-to-follow document. They are specifically created ***in addition to*** traditional professional and technical documents submitted for formal approval to regulatory agencies. In some communities, a CHAS*Plan* may be required dependent on the nature and size of a proposal. They are particularly relevant in relation to projects that are large, complex and multi-year in scope, and are especially useful to community residents when the program of

work includes potential health and environmental risks, with multiple agencies and entities involved in delivery and oversight.

A formal CHAS*Plan* includes:

1. Health and safety plans to protect surrounding communities during a project; assuring that effective methods and technologies are deployed in the planning process.
2. Effective methods and technologies are typically determined **during** intermediate design, and must be known **before** development of a CHAS*Plan* begins.
3. The *Plan* focuses on public health and safety, and addresses relevant portions of performance standards.
4. An effective process requires the design team to work with community leaders and local responders to coordinate response efforts.[3]

None of the sites within the CHASS Study Area have been designated as Superfund sites under federal action, and the National Environmental Policy Act (NEPA) is not applicable. However, as part of Voluntary Cleanup Plans related to the DC United Soccer Stadium site, an environmental mitigation study was prepared consistent with NEPA and District standards.[4]

Although there is no legislation in the District of Columbia requiring development of CHAS*Plan*s, this Community Health and Safety Study (CHAS*Study*) has been undertaken in response to resident concerns with respect to the redevelopment program proposed in the vicinity of Buzzard Point, over an 18 to 24 month period, through fall 2018. As such, this CHAS*Study* has been carried out in the spirit of a CHAS*Plan* Process, but should not be construed as 'the plan'. At the time of completion of this **CHASS,** several key documents are still in the pipeline, either under development or detailed review.

[3] EPA http://www.hudsoncag.ene.com/files/community%20health%20and%20safety%20plan.pdf

[4] Buzzard Point Soccer Stadium Environmental Mitigation Study (December 2014)

Part 2: Buzzard Point Redevelopment Program & DC United Stadium

The purpose of this section is to provide a high-level summary of the Buzzard Point Redevelopment Program (2016 to 2018); including project components; the anticipated sequence of component development, schedules and timeframes; and how they work together. Starting with a summary of the broader redevelopment context as currently proposed for Buzzard Point, including five key projects, the remainder of this section is more narrowly focused on just one project – the DC United Soccer Stadium. The soccer stadium project is the first of two primary public investments within the redevelopment program, the second being the South Capitol Street Bridge, which as of May 2016, did not have an established timeframe for development. The DC United Soccer Stadium development, which includes an associated voluntary cleanup program, provides a useful starting point. It also provides an opportunity for understanding the range of community health and safety issues generated by the complexity of the individual proposals and associated review processes. This enables focused consideration of the appropriateness of the technical and monitoring responses to the stadium development—essential to assure community health and safety.

The Buzzard Point Redevelopment Program:

PROJECTS:

- **Project 1: DC United Soccer Stadium**
- **Project 2: New PEPCO Substation**
- **Project 3: Existing PEPCO Substation**
- **Project 4: Existing Concrete Plant**
- **Project 5: South Capitol Street Bridge Rebuild**

Figure 2.1 Buzzard Point Redevelopment Map
*(Please see **Appendix 4** for a larger version)*

Similar summary assessments related to each of the remaining projects would be required to develop a complete picture. This is essential to the enhancement of community understanding.

The Redevelopment Program:

Several public investment projects are planned for the Buzzard Point area. In the near term (within five years) a $300 million DC United Soccer Stadium and $600 million replacement of the South Capitol Street Bridge across the Anacostia River are planned. These physical improvements are outlined in the Buzzard Point Vision Framework and Implementation Plan.[5] It will guide public and private development in the area for the next decade, focusing on infrastructure and transportation improvements, affordable housing advancements, as well as sustainability and environmental practices. Full development (10-20 years) would include both Buzzard Point and the Waterfront with the goal of creating a vibrant, walkable, mixed use-neighborhood with improved pedestrian circulation and access to the river.

The current **Buzzard Point Redevelopment Map**, as depicted in Figure 2.1 above (and detailed in **Appendix 4)**, identifies a total of five (5) major program components, which although in many ways separate in terms of ownership, and specific redevelopment schedules and timelines, are closely interrelated – especially as experienced by neighborhood and community residents. In launching this CHASS process, a phased approach was anticipated in recognition that some projects had not yet advanced sufficiently to realistically be included in the initial first phase. This especially applies to Project 5: South Capital Bridge Rebuild.

A brief synopsis of each of the five (5) projects in the Redevelopment Program is presented below:

Project 1: DC United Soccer Stadium
Description:

- **Current Use**: The stadium site was assembled by the District, and the District government has assumed responsibility for voluntary cleanup of contaminated parcels, prior to handover to DC United for development. The site has had industrial, commercial, public, and quasi-public institutional uses.
- **Proposed Use:** Construction of a new sports and entertainment venue that will be utilized specifically for soccer sport activities, and potentially other field sport interests.
- **Redevelopment Timeframe:**
    - **Overarching Timeframe (Projected Start & End Date**s): Demolition started April 2016. Completion of construction is projected in March 2018.

[5] Buzzard Point Vision Framework and Implementation Plan http://dmped.dc.gov/node/1104412 Retrieved March 16, 2016

- **Status as of May 1, 2016:** Ground breaking has occurred for the proposed site. Razing of buildings, and the installation of wet utilities on site will occur between April and September 2016.
- Remedial cleanup of soils and the proper implementation of the corrective action cleanup plan is scheduled to occur **before** any actual vertical construction of the new stadium can occur. The corrective action plan must be completed **before** vertical construction starts. This project has an immediate impact on the community.

Project 2: New Pepco Substation

Description:

- **Current Use:** Site is currently under development
- **Proposed Use**: Site will be used to increase capacity for Pepco to provide electrical energy to the District.
- **Redevelopment Timeframe:**
  - **Overarching Timeframe (Projected Start & End Date**s): Construction started in December 2015. Completion of construction is expected in September 2017.
  - **Status as of May 1, 2016:** Pepco started construction of the new substation located on the block of 100 Q Street SW. Pepco is also concurrently working on new underground duct banks transmission lines.

Project 3: Existing Pepco Substation

Description:

- **Current Use:** Provides electrical energy for use in the District.
- **Proposed Use:** Will continue current operation.
- **Redevelopment Timeframe:**
  - **Overarching Timeframe (Projected Start & End Date**s): Ongoing as detailed below.
  - **Status as of May 1, 2016:** A parcel of the substation site will be developed as a part of the soccer stadium project. The affected parcel will be external to the Pepco structure, which will not be touched. The development of the parcel will have impacts based on the DC United construction project.

Project 4: Existing Concrete Plant

Description:

- **Current Use:** Produces concrete aggregate for use by construction sites in the District.
- **Proposed Use:** Will continue to operate until relocation out of Buzzard Point.
- **Redevelopment Timeframe:**

- **Overarching Timeframe (Projected Start & End Date**s): Ongoing; the concrete plant is expected to remain in operation at the current location and serve the above mentioned projects through 2018.
- **Status as of May 1, 2016:** Plant will continue to operate. DOEE will continue to work through the plant leadership, sister agencies, and federal agencies to address dust control issues in and around these plants. The existing concrete plants already have an impact on the community and during construction activities will continue to have an impact on the community.

Project 5: South Capitol Street Bridge Rebuild
Description:

- **Current Use:** Vacant area, that is currently fenced for safety and security.
- **Proposed Use:** Construction of new bridge across the Anacostia River for the District.
- **Redevelopment Timeframe:**
  - **Overarching Timeframe (Projected Start & End Date**s): Precise start and end dates for this project are still to be determined. The District Department of Transportation (DDOT) is in the process of procuring a design-build contractor, and expect to begin construction in mid-2018, with completion projected in 2020.
  - **Status as of May 1, 2016:** There is currently no established timeframe for any site development. This project will not have an impact on the community until construction starts -- within the mid-2018 through 2020 window, as estimated above.

DC United Soccer Stadium

The DC United Soccer Stadium development is the first of two primary public investments within the Buzzard Point Redevelopment program. The stadium development, which includes a voluntary cleanup program, provides a useful starting point and opportunity for understanding the range of community health and safety issues. The project description includes management and oversight, site assembly, and the development schedule. These details provide the background for Part 4 through Part 8 of this report, which rely on documents submitted by DC United, such as the Hazard Assessment and Control Plans, and Monitoring Program Plans as the basis for focused consideration of the appropriateness of the technical and monitoring response, essential to assure community health and safety.

Management & Oversight:
The Office of the Deputy Mayor for Planning and Economic Development (DMPED) is coordinating this project, working with the DDOT, Office of Planning (OP), Department of General Services (DGS) and Department of Energy and Environment (DOEE).

Figure 2.2: DC United Soccer Stadium Site

Site Description

The site of the proposed stadium area currently includes eight parcels of land, south of Potomac Ave and R Street, SW, east of 2nd Street SW, north of T Street, SW and west of Half Street, SW (see map). Historically these parcels have been used for vehicle fueling and storage, salvage operations and electrical power management.

The District had completed the purchase of all parcels as of November 2015. The District-owned parcels were used as a salt storage facility, and was most recently leased by Super Salvage to store vehicles and equipment. The Super Salvage parcel had been operated as a salvage yard for metals and has been in operation since the 1950s. An additional parcel had been used as office space and was occupied by the headquarters of Motivate, Inc. (formerly Alta Bicycle Share), who administers the Capital Bike Share Program. Three parcels, previously owned by Pepco, had been used for above ground fuel oil storage tanks and for an electrical power management substation, but were vacated in advance of the sale to the District. The last parcel, previously owned by Akridge, had been used as a parking lot and garage, where Pepco had historically used the area as a gasoline filling station for vehicles. It currently is a parking lot and a vacant warehouse.

The stadium site, as shown in Figure 2.2 above, is located two blocks from the Anacostia River, which converges with the Potomac River approximately one mile downstream from the site. In geological terms, the proposed site is located above the Coastal Plain surficial aquifer where the water table varies at depths between 24 feet and 8 feet below ground surface. All groundwater in the District is classified as Class G1, which is considered to be the most restrictive classification, defining the groundwater as highly vulnerable to contamination.

The first phase of the soccer stadium development process, is the demolition and remediation of the site, under a voluntary cleanup process, prior to active construction. The District is responsible for acquiring, assembling, and preparing the above area for the building of a soccer stadium for Washington's Major League Soccer (MLS) franchise, DC United. In addition to acquiring private property, the District would be responsible for preparation of the land prior to stadium construction, which includes the voluntary remediation of hazardous materials, utility relocation, demolition of existing structures on the site, and approvals for street closures.

The District would enter into a ground lease with DC United, who would then be responsible for the design, construction, and operation of a soccer stadium (Buzzard Point Environmental Mitigation Study 2014). As currently envisioned, the stadium will seat between 18,000 and 20,000 fans and will include team support spaces, concession and merchandising space, building operations facilities, broadcast and press facilities and a restaurant and lounge. The elevation of the field and stadium entrances will be at approximately the existing site grade, with no below grade building spaces. According to current plans, stadium foundations will not be deeper than 10 feet below the existing ground service.

Measures to assess and protect the environment have been conducted as a part of this project. The area slated for demolition (outlined in the above map in red) has historically been used for industrial purposes, with the Super Salvage parcel being the area of most concern. As a result, in December 2014 the District completed a Buzzard Point Environmental Mitigation Study.

The Environmental Mitigation Study (EMS) was prepared by the District and its environmental team. The EMS identifies and documents the impacts on the natural and man-made environment associated with the proposed stadium, including those related to the acquisition and consolidation of property and the construction and operation of the proposed stadium. Because the proposed stadium is not a federal action, the National Environmental Policy Act (NEPA) is not applicable. However, the EMS has been prepared consistent with NEPA and District standards, including specific impact assessment methodologies and the identification of appropriate mitigation measures. Applicable federal, District, and local regulations, laws, and guidelines were addressed in the preparation of this EMS (Buzzard Point EMS 2014, pg. 1-1)

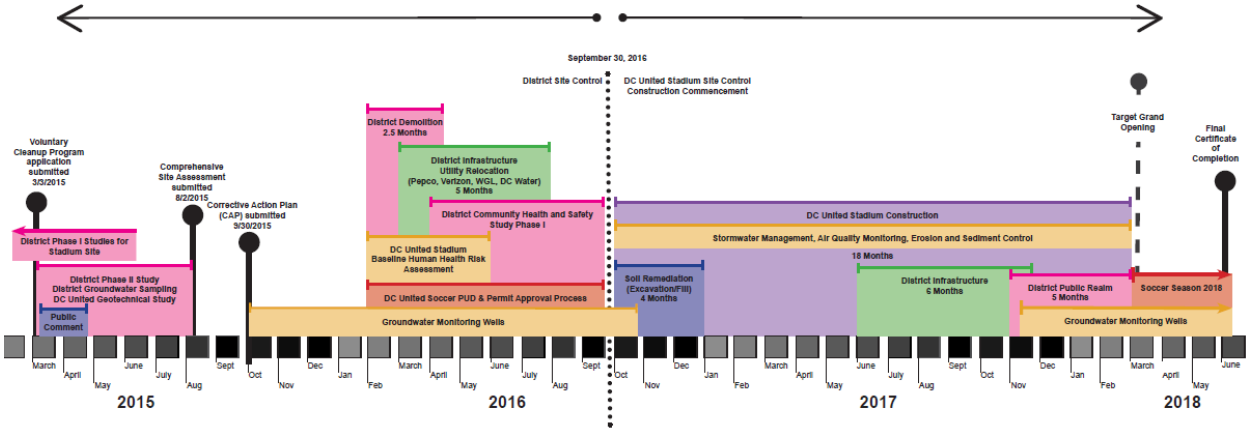
Equally important is the health and safety of the project workers and the people living and working within this community. A project of this size will take approximately 18 months to complete and will result in increased construction traffic from heavy equipment and trucks that will generate additional noise, light, odors, traffic and other temporary inconveniences associated with work areas.

DC United Project Schedule

The Department of General Services (DGS) is the initiating agency for the District of Columbia's obligations described in the Soccer Stadium Development Act of 2014 and subsequent development agreement with the DC United Soccer team for the Soccer Stadium at Buzzard Point. In summary, the District is required to acquire the soccer stadium site and prepare it for development, including utility relocation, demolition of above-grade structures, and environmental remediation. The following is a narrative summary of the project construction timeline developed by the DGS in coordination with DC United:

A. District Site Control (March 2015 – October 2016)

The District Site Control phase includes a comprehensive site assessment, demolition of existing structures, infrastructure and utilities relocation, and community health and safety study (Phase 1) by the District. Simultaneously, DC United is preparing a Human Health Risk Assessment.



DC UNITED SOCCER STADIUM
PROJECT CONSTRUCTION TIMELINE

Figure 2.3: DC United Soccer Stadium Project Construction Timeline*
*(Please see **Appendix 7** for a larger version)*

1. **Voluntary Clean-Up Plan (VCAP) Application:** DGS submitted the Voluntary Clean-Up Plan application to the Department of Energy & Environment (DOEE) on March 3, 2015.
2. **Phase 1 and 2 Studies for the Stadium Site:** During the period of March-August 2015, Haley & Aldrich, Inc., on behalf of DGS and DC United, completed the environmental and geotechnical studies to determine the extent of site remediation required as part of the Voluntary Clean-Up Plan (VCAP) application.
3. **Corrective Action Plan (CAP):** Based on the environmental and geotechnical investigations, on behalf of DGS, Haley & Aldrich, Inc. submitted the CAP to DOEE for approval on September 30, 2015. DOEE approved the CAP on October 1, 2015.
4. **Groundwater Monitoring:** DC United's geotechnical consultant, Haley & Aldrich, Inc. installed two groundwater monitoring wells to assess potential contaminants and establish a baseline for the project between October 2015 and October 2016.
5. **District Demolition:** DGS' hazmat abatement and demolition contractor, Goel Services, mobilized on April 4, 2016 and expects to complete demolition and site clean-up by June 2016. DGS's contractor will install on-site air-quality monitoring stations and execute a dust control plan between April and June 2016. The data will serve as a baseline for the Stadium project.
6. **DC United Planned Unit Development (PUD) Submission, Design Development and Public Approvals:** DC United's Architect/Engineer (A/E) team submitted the PUD for the Soccer

Stadium to the DC Zoning Commission on January 19, 2016. The A/E team expects to complete the design development drawings and public approvals for the Stadium between January and October 2016.

7. **DC United Baseline Human Health Risk Assessment:** DC United Construction Manager, Clark Construction, expects to have a preliminary draft by April/May 2016. The draft will be finalized prior to starting vertical construction on the stadium building, scheduled for April to August 2016.
8. **District Community Health and Safety Study (Phase 1):** The Department of Health (DOH) expects to develop a Community Health and Safety Study (CHASS) to address potential community health and safety issues for the public in the vicinity of multi-phased voluntary clean up and development of the DC United Soccer Stadium between April and October 2016.

B. DC United Stadium Site Control and Construction (October 2016 – March 2018)

The DC United Stadium Site Control and Construction phase includes site control and monitoring measures, soil remediation, construction of the Stadium, groundwater monitoring, District infrastructure and public realm improvements, commencement on site by the 2018 Soccer season and final completion of the project.

1. **Stormwater Management, Air Quality Monitoring, and Erosion and Sediment Control:** DC United's Construction Manager, Clark Construction, will install erosion and sediment control measures around the perimeter of the site, storm water management measures, and continue with the air-quality monitoring during construction between October 2016 and March 2018.
2. **Soil Remediation:** Based on the approved CAP, DC United's Construction Manager will remediate contaminated soil between October 2016 and January 2017.
3. **DC United Stadium Construction:** At the same time as the soil remediation, DC United's Construction Manager, Clark Construction, expects to commence site work and foundations for the Stadium in October 2016 and substantially complete construction by March 2018.
4. **District Infrastructure:** Based on public service commission's approval, Pepco expects to relocate and install transmission lines for the new substation in a 30-foot wide easement on the District's site along Half Street between June and November 2017.
5. **District Public Realm Improvements:** DC's General Contractor for infrastructure improvements, W.M. Schlosser, expects to install landscaping, streetscape equipment and furniture, low-impact development (LID) and traffic control devices in the public realm adjoining the site between November 2017 and March 2018.
6. **Ground Water Monitoring:** DC United's Construction Manager, Clark Construction, will install ground water monitoring wells to monitor the effectiveness of the remediation measures between October 2016 and March 2018. The monitoring wells will be left in place indefinitely.
7. **Commencement of Soccer Season 2018:** Based on substantial completion of the Stadium, DC United expects to open the facility for the 2018 Soccer Season in March 2018.
8. **Certificate of Final Completion:** The anticipated date for issuance of the certificate of final completion based on building commissioning, completed punch list and contract closeout is June 2018.

Part 3: Community Health Status Assessment

The purpose of this section is to present a descriptive analysis of the current health status of the Buzzard Point community, including comparisons with Ward 6 and the District of Columbia as a whole, to include national averages.

Utilizing primarily data available at the zip code and census tract levels, the following discussion on community health status covers: selected demographics; population density; socio-demographic composition and status; as well as health outcomes. The analysis is based on a **Buzzard Point Community Health Status Assessment Area (CHS Assessment Area)** as defined by the 20024 Zip Code as shown below (Figure 3.1; and expanded in ***Appendix 2***). Note that this area is larger than the resident defined "Buzzard Point Neighborhood", as well as the District's Buzzard Point Redevelopment Area, as delineated in Part 2. The **CHS Assessment Area** covers a total of 11,245 residents (American Community Survey 2010-2014). It includes all residents due south of M Street, SW and west of South Capitol Street SW. The 20024 zip code includes Fort McNair to the west, and the mostly commercial and industrial areas to the southeast, that is beyond the residential neighborhood boundaries along Potomac St., SW. The Navy Yard-Ballpark and Waterfront Metrorail stations anchor the eastern and western ends of M Street, SW that form northern boundaries of census tracts CT110 and CT064, with the majority of all residences located within a mile or less of these two stations.

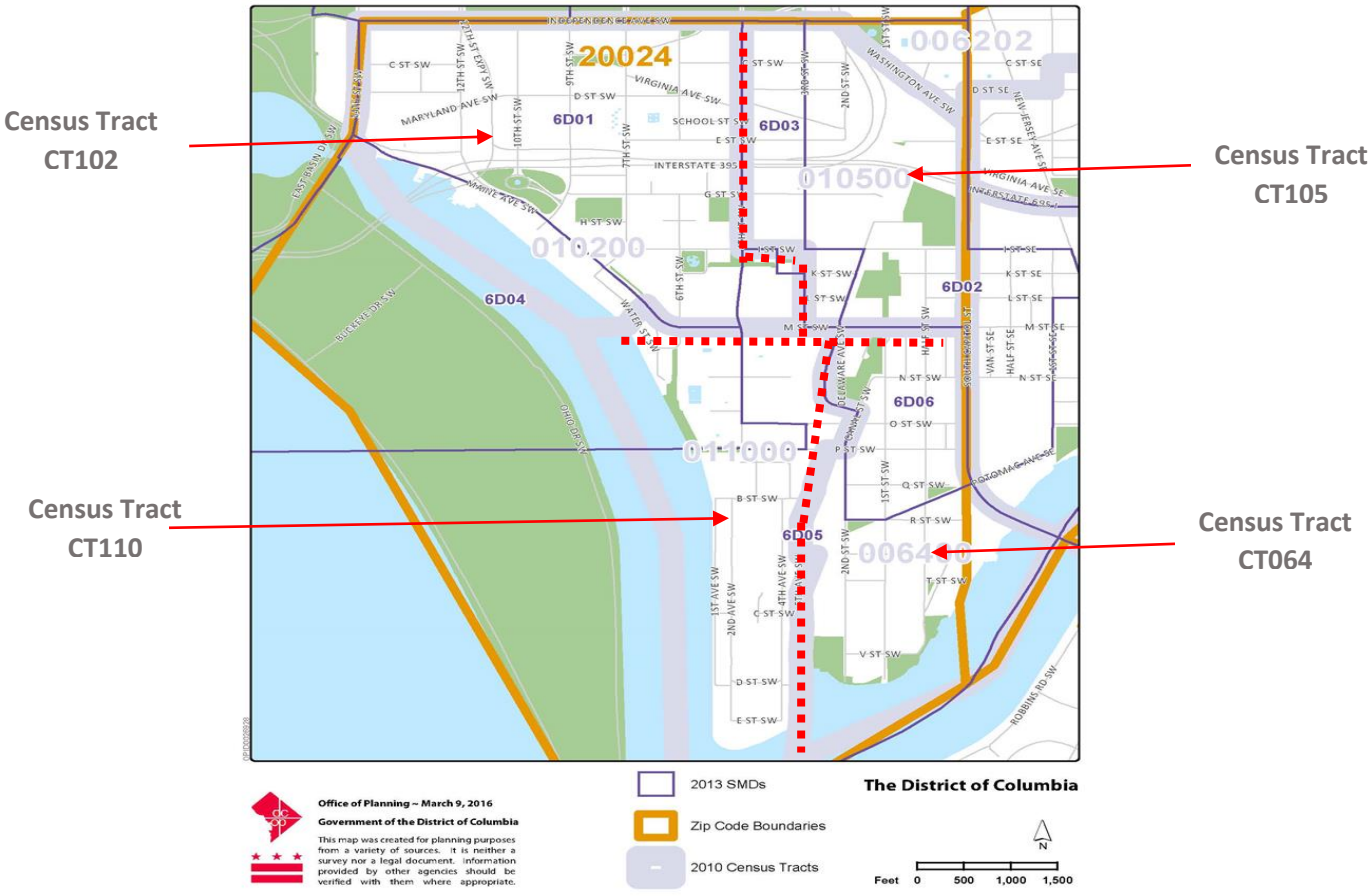


Figure 3.1: Buzzard Point Community Health Status Assessment Area (CHS Assessment Area)
KEY:* = *Approximate Census Tract Boundaries

Table 3.1. CHS Assessment Area Selected Demographic -

20024 Zip Code; District of Columbia; and United States* Compared

Selected Characteristic ACS 2010-2014 Estimates	20024 Zip Code N (%)	District of Columbia N (%)	United States (%) N (%)
Total Population	11,245 (100%)	633,736 (100%)	314,107,084 (100%)
Race			
Black/African American	5,318 (47.3%)	314,138 (49.6%)	39,564,785 (12.6%)
White	4,834 (43.0%)	254,955 (40.2%)	231,849,713 (73.8%)
Hispanic or Latino	639 (5.7%)	62,637 (9.9%)	53,070,096 (16.9%)
Sex			
Female	6,162 (54.5%)	333,706 (52.7%)	159,591,925 (50.8%)
Male	5,083 (45.2%)	300,030 (47.3%)	154,515,159 (49.2%)
Age			
Under 5 Years	392 (3.5%)	38,546 (6.1%)	19,973,711 (6.4%)
5-14 Years	534 (4.8%)	53,490 (8.4%)	41,159,238 (13.1%)
25-44 Years	4499 (40.0%)	227,267 (35.8%)	88,033,222 (26.5%)
65+ Years	1743 (15.5%)	71723 (11.3%)	43,177,961 (13.8%)

Data based on 2010-2014 American Community (ACS) Survey 5-Year Estimates

*Because selected characteristics highlight key demographic characteristics, the sum of column characteristics will not equal 100%.

CHS Assessment Area Demographics: Zip Code 20024

Demographic data for the 20024 zip code indicates a diverse community, within which Black/African Americans comprise a slight majority (47.3%); closely followed by Whites (43.0%) as shown in Table 3.1 above. Hispanics make up 5.7% of residents, a little over half of the rate for the overall Hispanic population within the District of Columbia (9.9%). The zip code mirrors District of Columbia demographics in regards to gender, with women as the majority in the 20024 zip code (54.8%).

With respect to age, children under 5 years old are 3.5% of residents, whereas those age 5 to 14 years old represent 4.8% of inhabitants. Individuals in the 25-44 years old age group are the overwhelming majority (40%), while elderly individuals (age 65+) are 15.5% of the 20024 population. The elderly population is slightly higher when compared to the District of Columbia overall (11.3%).

CHS Assessment Area Population Density: Zip Code 20024

Table 3.2: CHS Assessment Area Population Density

Geographic location	Total Population	Total Land Area (Square Miles)	Population Density (Per Square Mile)
CHASS Study Area (Zip Code 20024)	11,245	2.61	4,308.43
District of Columbia, DC	633,736	61.14	10,365.33
United States	314,107,083	3,531,932.26	88.93

CHS Assessment Area - Sub-Area Census Tract Demographics: (Tracts 102,105,110 & 64)

Another way of considering the demographic makeup of the CHS Assessment Area, is to look more closely at the composition of individual census tracts. The area in which the Buzzard Peninsula is located is covered by a total of four (4) U.S. Census Tracts (CT). As shown in Figure 3.1 above, the four census tracks essentially divide the study area into quadrants as follows:

- Census Tract (CT) 102: North-West Quadrant of Buzzard Point Peninsula
- Census Tract (CT) 105: North-East Quadrant of Buzzard Point Peninsula
- Census Tract (CT) 110: South-West Quadrant of Buzzard Point Peninsula; and
- Census Tract (CT) 064: South-East Quadrant of Buzzard Point Peninsula

The dividing line between north and south (top and bottom) is approximately at M Street SW, and marks the northern boundary of Census Tracks CT110 and CT64. The western boundary of CT064 aligns with the resident defined Buzzard Point Neighborhood. Available social and economic data for CT064, is therefore a good representation for neighborhood-level analysis.

The total population across the four census tracts, plus their breakdown by race and ethnicity is presented in Table 3.3 below. The total population at 11,334, per the 2010-2014 American Community Survey (ACS) five-year estimate is slightly higher but comparable to the measure for the Zip Code 20024 as referenced above. Using data at the census tract level, we are able to break out not only the distribution of the study area population, but also get a closer look at their composition, including comparisons of their similarities and differences, both across the 4 tracts, as well as in comparison with all 178 census tracts in the District of Columbia.

The population data in Table 3.3 shows that while 22.4% of the residents in the study area are concentrated in Census Tract 102; comparable numbers are 30.2% for CT 105; 29.8% for CT 110; and 17.5% for CT064. Differentials by race and ethnicity are also notable, with 89.7% Black non-Hispanic concentrated in CT064; compared with 39.8% in CT105; 32.1% in CT110; and 39.6% in CT102. Overall, residents in the study area are 46.2% Black or African American; which is somewhat lower than the average for all census tracts in the District of Columbia at 48.7%.

The bottom of Table 3.3 also provides a summary of comparable data for the Advisory Neighborhood Commission (ANC) 6D in 2012, with averages that track more closely with the District as a whole. Residents in the study area are comprised of smaller proportions of Hispanic and foreign-born populations. This is especially represented in CT64.

	Total Population 2010-14 ACS 5-Year Estimates	*(%) Black non-Hispanic*	*(%) White non-Hispanic*	*(%) Asian non-Hispanic*	*(%) Hispanic*	*(%) Foreign Born 2010-14*
All DC Tracts (n=178)		**48.7%**	**35.4%**	**3.6%**	**9.9%**	**14.0%**
■ ***CT 102***	***2,543***	***39.6%***	***43.6%***	***5.8%***	***6.2%***	***14.8%***
■ ***CT 105***	***3,427***	***39.8%***	***45.8%***	***6.5%***	***5.6%***	***15.2%***
■ ***CT 110***	***3,378***	***32.1%***	***53.9%***	***4.3%***	***7.0%***	***12.8%***
■ ***CT 064***	***1,986***	***89.7%***	***4.1%***	***2.7%***	***3.0%***	***5.2.7%***
All Study Area CT's (n=4)	***11,334***	***46.2%***	***40.4%***	***5.0%***	***5.7%***	***12.7%***
***ANC6D 2012**[6]	**14,359**	**51%**	**37%**	**5.3%**	**5.2%**	**12%**

Table 3.3: CHS Assessment Area and Census Tract (CT) – Population, Race & Ethnicity

[6] http://www.urban.org/research/data-methods/interactive-maps/dc-neighborhood-reference-map

	Mean Family Income % 2010-14 ACS 5-Year Estimates	(%) Unemp-loyment Rate	(%) Family Poverty	(%) Children in Poverty	(%) Seniors in Poverty	(%) Family Car Ownership
All DC Tracts (n=178)	*$130,984*	*10.6%*	*18.2%*	*27.5%*	*13.8%*	*63.8%*
■ *CT 102*	*$158,958*	*4.9%*	*5.3%*	*14.2%*	*2.0%*	*66.5%*
■ *CT 105*	*$136,790*	*7.8%*	*9.5%*	*7.5%*	*1.9%*	*48.8%*
■ *CT 110*	*$140,526*	*7.4%*	*3.9%*	*0.0%*	*3.7%*	*74.0%*
■ *CT 064*	*$32,070*	*18.7%*	*47.0%*	*55.7%*	*32.0%*	*34.3%*
*ANC6D 2012[7]	$100,297	7.0%	3.0%	29%	14%	60%

Table 3.4: CHS Assessment Area and Census Tract – Social Wellbeing (ACS 2010-14)

The social wellbeing data presented in Table 3.4 above provides deeper insight on the relative position of children, families and seniors across the four census tracts. While as shown at the bottom of the table, average income in 2012 for the whole of the ANC6D area was $100,297, with unemployment at 7% -- which was lower than the District census tract average of 11% -- circumstances within the individual Buzzard Point census tracts varied distinctly, one with the other. Average family income was highest in CT102 at $158, 958; with an unemployment rate of just 4.9%. For census tracts 105 and 110, average family income was $136,790, and $140,526; and unemployment at 7.8% and 7.4% respectively. Relatively high levels of child poverty in census tract 102 is notable at 14.2%, as compared with CT106 and CT110 at 7.5% and 0.0% respectively, but still considerably low in comparison with CT064 as noted below.

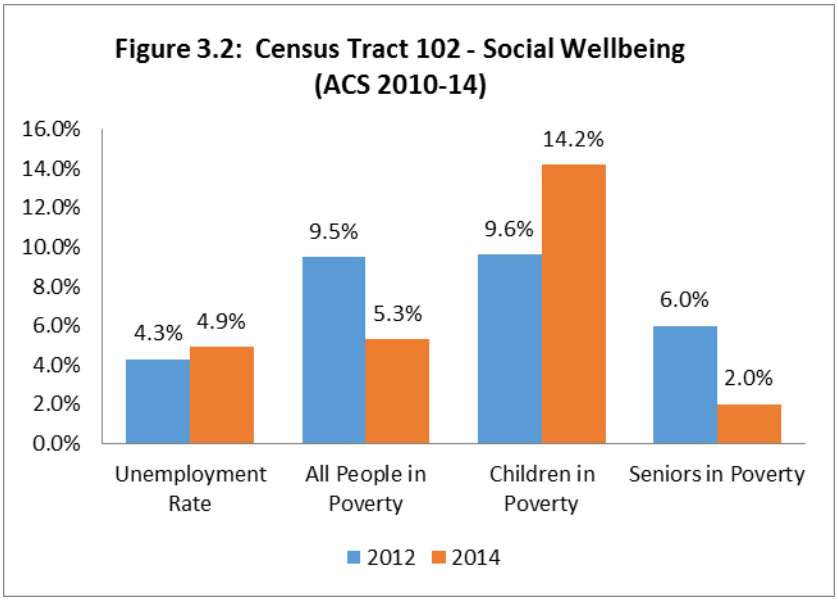
Strikingly different circumstances pertain in census tract 64 by all measures presented. Mean family income at $32, 070 for 2010-2014 was about a third of the ANC6D average, and a quarter for all DC census tracts. Nearly half (47%) of residents were in poverty; rising to more

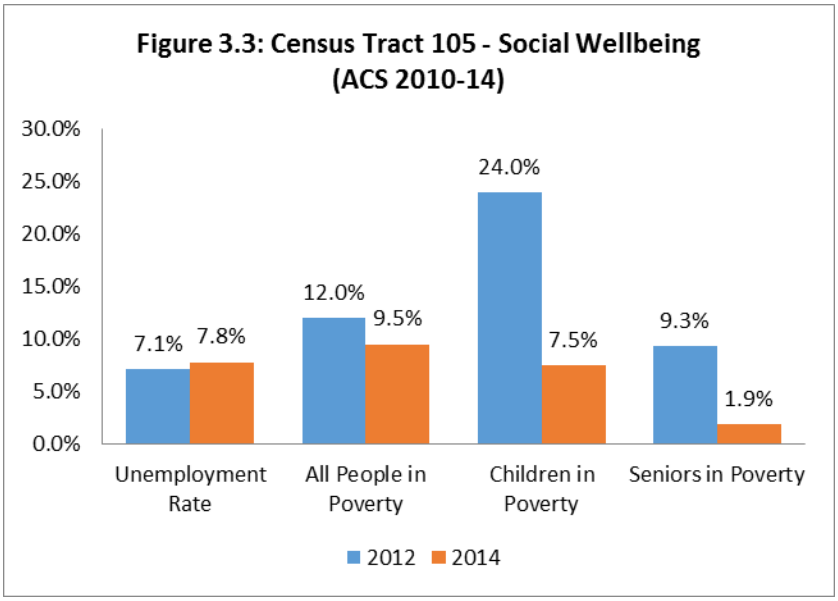
[7] http://www.urban.org/research/data-methods/interactive-maps/dc-neighborhood-reference-map

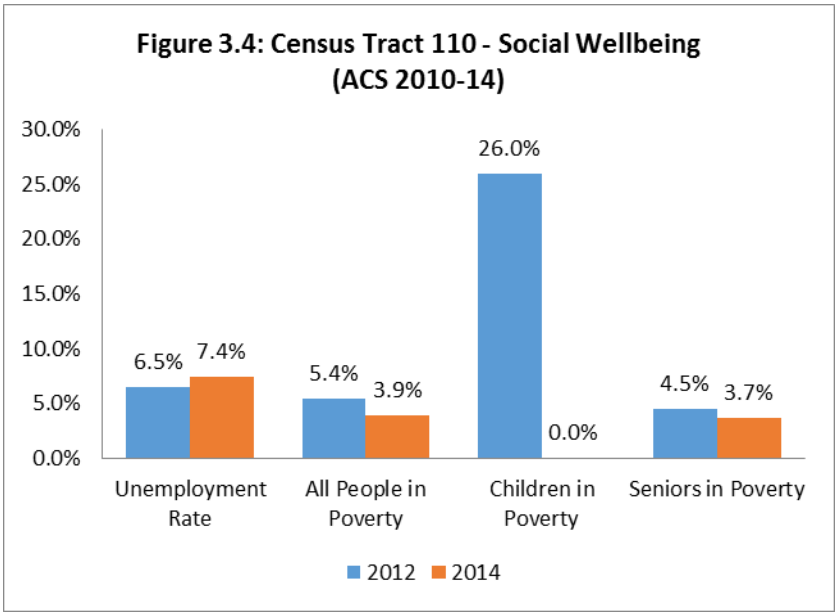
than half of all children (55.7%) under 18 years old. Nearly one in three seniors (32%) in CT64 were in poverty; and less than one in three (34%) of resident households had access to a car.

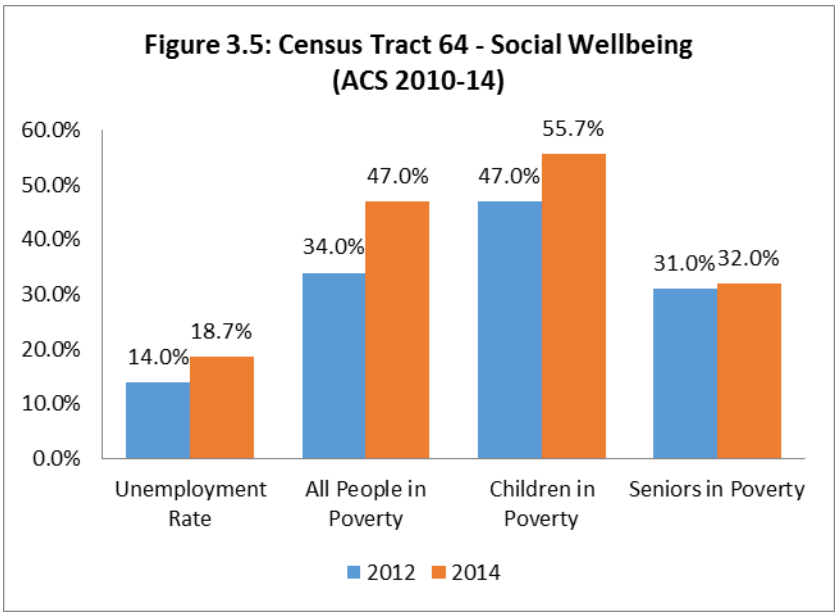
Five Years of Neighborhood Change: 2010 to 2014

Each of the four Buzzard Point census tracts have experienced differing trends in terms of social wellbeing over the last five years. The data below (Figures 3.2; 3.2; 3.4 and 3.5) present social wellbeing indicators – unemployment and poverty – showing how they have changed within each of the census tracts between the decennial 2010 census, as compared with American Community Survey (ACS) five-year estimates for 2014.









All four census tracts have experienced unemployment increases, which while marginal (less than one point) in CT 102; CT105, and CT110; the increase in CT064 which started off at a level more than twice that of the others, saw a more significant increase, in excess of four points to 18.7%.

Over the five-year period 2010 to 2014, the percentage of all people in poverty went down significantly in CT102, appreciable in CT105, and modestly in CT110. However, the percentage of all people in poverty rose significantly in CT64, which grew from 34.0% in 2010, to 47.0% in 2014. Similarly reducing patterns also occurred in each of the census tracts for seniors in poverty, with the exception of CT64 that saw the only increase in senior poverty, up by one point to 32%.

The picture across the Buzzard Point peninsula with respect to children in poverty is more mixed however. A marked increase from 9.6% up to 14.2% in CT102, is matched with a significant decrease down from 24.0% to just 7.5% in CT105; but an even more dramatic reduction in CT110, which saw the 2010 child poverty rate of 26%, literally disappear (0%) in 2014. In CT64 however, the data does not indicate any positive changes in social wellbeing. Here, contrary to the trends in the other three census tracts, children in poverty increased from 47.0% to 55.7%.

"Buzzard Point Neighborhood" in 30-Year Context *(Census Tract 64 only)*: 1980 to 2010

A closer look at the sociodemographic context and change for the Buzzard Point Neighborhood is an important lens that must inform this CHASS, especially with respect to an understanding of the community's social health and wellbeing. For this purpose, 30 years of historical census data (1980 to 2010) for US Census Tract 64, has been utilized as the neighborhood representation. Specifically, use was made of the Urban Institute's online *Neighborhood Info DC* Portal.[8] The data for Census Tract 64 (CT64) between 1980 and 2010, shows significant shifts across the 30 year period. Total population has decreased by nearly 40% -- falling from 3,403 in 1980, down to 2,139 by the s2010 census – with the most dramatic reduction occurring in the first 20 years. This is significantly higher when compared with all other census tracts in the District of Columbia (n=178), where the average reduction was in the -5% range, and where this was transformed to +5% net growth between2000 and 2010. The race and ethnicity of CT64 residents back in 1990, indicate 97% black, non-Hispanic; with this concentration falling to 87% by 2010. Less than 1% were foreign born in 1980, which by 2010 was nearing 9%. Families made up of female headed households with children, grew from 77% in 1990 to 87% between2008-12. The senior population also increased – starting at 7.5% of the population in 1980; their percentage grew dramatically to 20% by 2000; but has fell to 11% in 2010. During the time period, the rate of low birthweights (under 5.5 lbs.) was more than halved – from 22% in 1998, down to 10% for the most recently available data (2011). Birth to teen mothers, went up – from 18% in 1998, to 23% in 2011.

In terms of social well-being, the data indicates dramatic swings since 1980, when average poverty for CT64 was 54%; but fell to an average of 34% for 2008-12. The number of children living in poverty has fell, from 61% in 1990, to 31% 2008-12. Numerically, senior poverty was the same at 31% in both 1990 and 2008-12. However, it hides the fact that there was a dramatic doubling in senior poverty rate that was as high as 61% in 2000.

Similarly, unemployment rates in 1980 were 14%, and were the same as in 2008-12. This masks the very dramatic rise to 31% in 1990, before falling again, to 16% in 2000. These rates compare to District wide census tract averages which registered 6.8% in 1980, rising to 7.2% in 1990; and maxing out at 11% respectively, in 2000, and 2008-12.

[8] http://www.urban.org/research/data-methods/interactive-maps/dc-neighborhood-reference-map

Average CT64 family income in 1979 was $27,207; the lowest for the District at the time, and about one third (35%) of the $77,355 average across all census tracts. This was a fraction (10%) of the then-highest income at $254,017 for all census tracts. Comparison family income for the 2008-12 period shows an average at $34,104 for CT64; $121,548 for all census tracts; and $386, 029 as the highest across all census tracts. During the 2008-12 time period, the lowest average family income amongst all DC census tracts was $22,458.

One measure of relative isolation uses household access to a phone, and car ownership as indicators. By those measures, phone ownership rates at 95% is two points lower than the average DC census track. However, only one in three CT64 households have access to a car (2008-12), compared with a high of 64% elsewhere.

Also, like across the entire city, both violent crimes (per 100,000 pop.), and property crimes (per 100,000 pop.), have seen significant reductions in the Buzzard Point Neighborhood census tract (CT64), but remain above the average for all census tracts across the district.

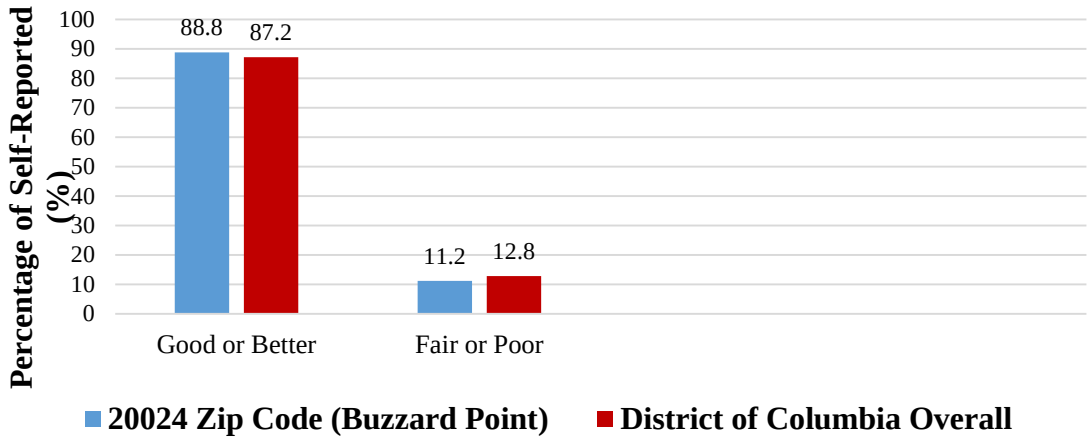
Overall, these data documenting the relative social wellbeing of residents in US Census Tract 64 over three decades, underscore the elevated historic and contemporary vulnerability of the Buzzard Point Neighborhood, by comparison with its immediate neighbors on the Buzzard Point Peninsula, as well as with that of the District of Columbia as a whole.

CHS Assessment Area - Health Outcomes: Zip Code 20024

The 20024 zip code has similar health outcomes compared to the District of Columbia overall for several indicators. According to 2013 data from the Behavioral Risk Factor and Surveillance System (BRFSS), 88.8% of individuals surveyed in the 20024 zip code indicated they had 'good or better' health compared to 87.2% of all District residents (Figure 3.6 below). Likewise, 11.2% of 20024 residents indicated they had 'fair or poor' health, while 12.8% of District residents reported 'fair or poor' health. However, for self-reported asthma in years 2011-2013, 12.4% of those surveyed in the 20024 zip code reported having asthma compared to 10.8% of District residents (Figure 3.7).

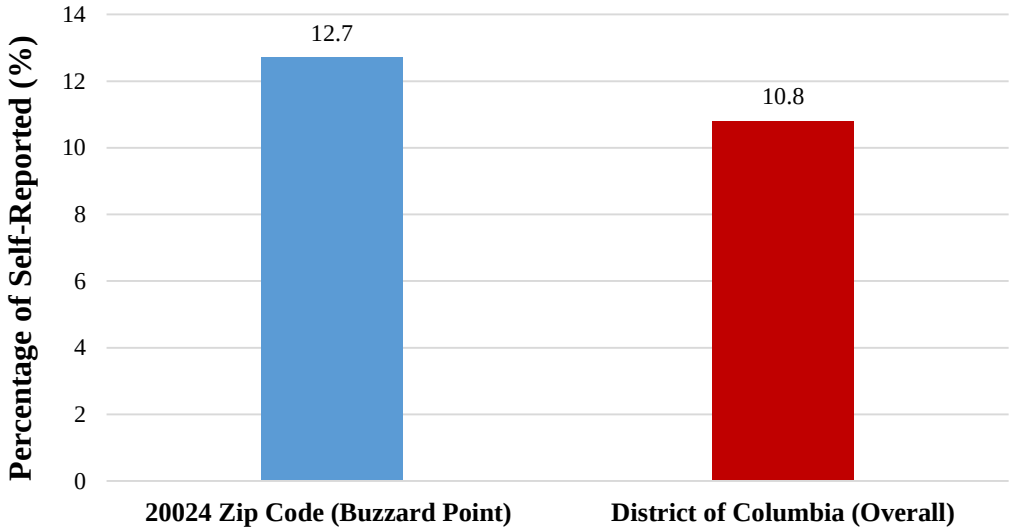
With regards to self-reported tobacco and alcohol use (shown in Figure 3.8 above), 69% of those surveyed in the 20024 zip code indicated they drank alcohol within 30 days of being surveyed, slightly higher than the District overall (65%). Similarly, 8.5% of individuals surveyed in the 20024 zip code reported being a heavy drinker, compared to 8.0% of District residents overall. In contrast, 19.5% of those in the 20024 zip code reported binge drinking compared to 23.4% of the District overall. Smoking was slightly less prevalent in the 20024 zip code than for those in the District overall (19% vs. 19.7%, respectively).

Figure 3.6: 2013 Behavioral Risk Factor Surveillance System (BRFSS) Self-Reported Health Status



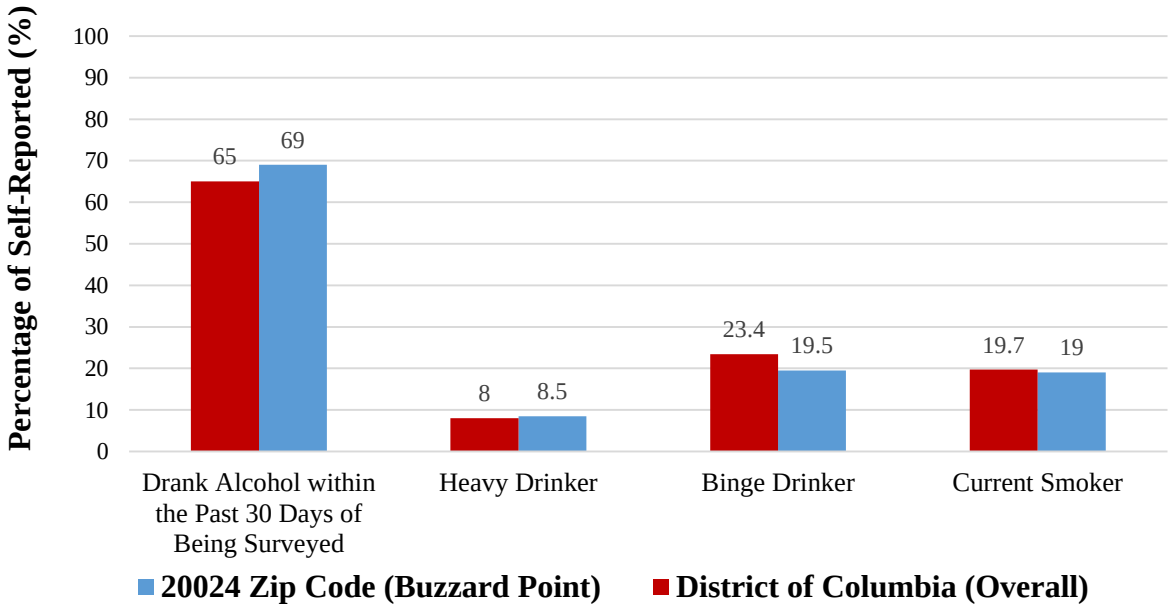
Data Source: Behavioral Risk Factor Surveillance System (BRFSS). (2013). District of Columbia.

Figure 3.7: 2011-2013 Behavioral Risk Factor Surveillance System (BRFSS) Self-Reported Asthma



Data Source: Behavioral Risk Factor Surveillance System (BRFSS). (2011-2013). District of Columbia.

Figure 3.8: 2012-2013 Behavioral Risk Factor Surveillance System (BRFSS) Self-Reported Substance Use

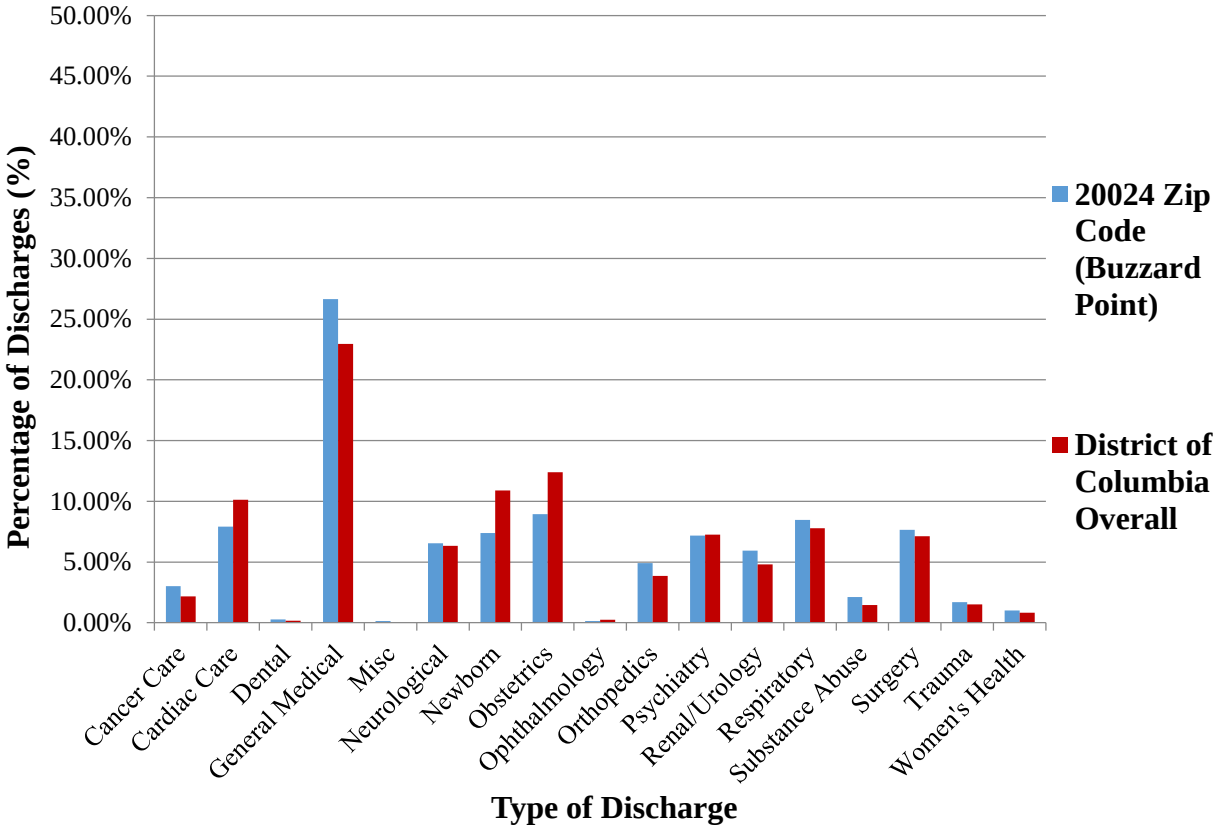


Data Source: Behavioral Risk Factor Surveillance System (BRFSS). (2012-2013). District of Columbia.

CHS Assessment Area - Hospital Discharge Data: Zip Code 20024

According to hospital discharge data from 2013-2014, residents from the 20024 zip code had a slightly higher rate (four percent) of general medical discharges than the District overall (Figure 3.9 below). Additionally, cancer, orthopedics, renal/urology, and respiratory discharges are approximately one point higher for the 20024 zip code compared to the District overall. In contrast, hospital discharges related to cardiac care, newborns, and obstetrics were approximately four percent lower for the 20024 zip code than the District at large.

Figure 3.9: 2013-2014 Hospital Discharges

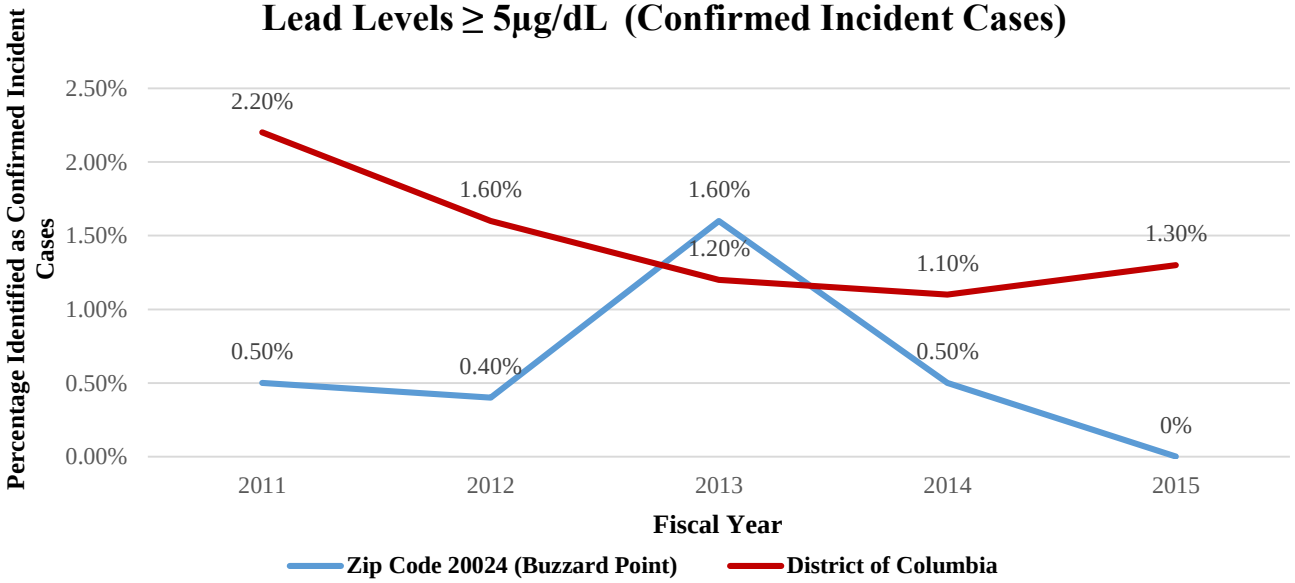


Data Source: DC Department of Health; Center for Policy, Planning and Evaluation. (2015). 2013-2014 Hospital Discharges

CHS Assessment Area - Childhood Lead: Zip Code 20024

Within the 20024 zip code, among children under age 6 who received blood lead testing in years 2011-2015, there were less than five incident (i.e. new) cases each year where blood lead levels were greater than or equal to 5 µg/dL (DC Department of Energy & Environment, Lead and Healthy Housing Division, 2016). Other than in 2013, the 20024 zip code has had a substantially lower proportion of children diagnosed with abnormal blood lead levels compared to the District overall (Figure 3.10).

Figure 3.10: Proportion of Children Under Age 6 With Blood Lead Levels ≥ 5µg/dL (Confirmed Incident Cases)



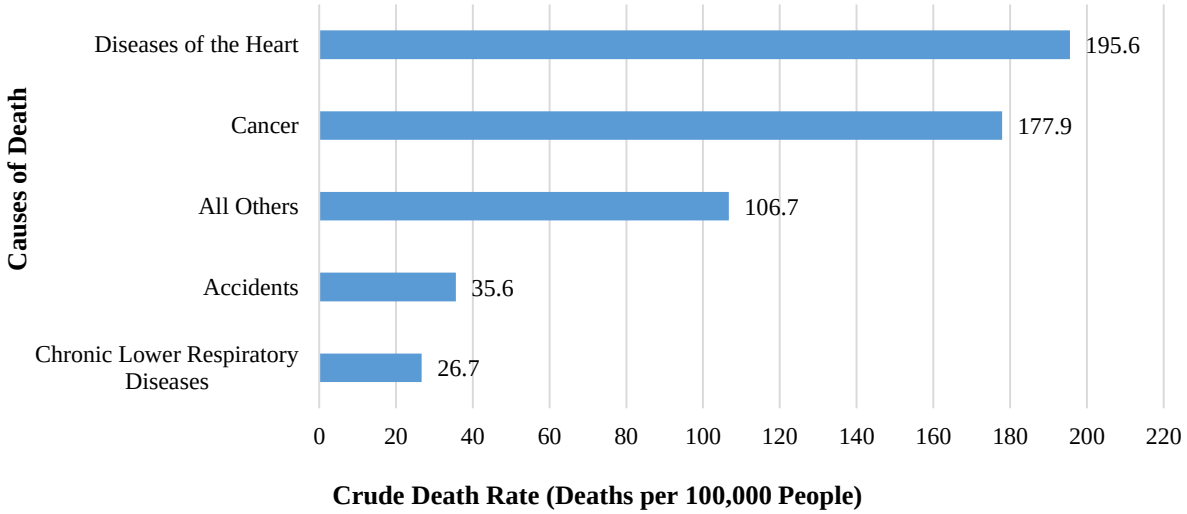
Data Source: DC Department of Energy & Environment, Lead and Healthy Housing Division. (2016). Lead Data.

CHS Assessment Area - Mortality: Leading Causes of Death

In 2014, the top five causes of death for the District in general and those for the 20024 zip code were similar (See Figures 3.11 and 3.12 below). However, the data shows higher death rates for diseases of the heart and cancer in the zip code than across the District as a whole. Chronic lower respiratory diseases are shown to be the number five cause of death in the study area, whereas cerebrovascular disease was the number five cause of death for the entire District.

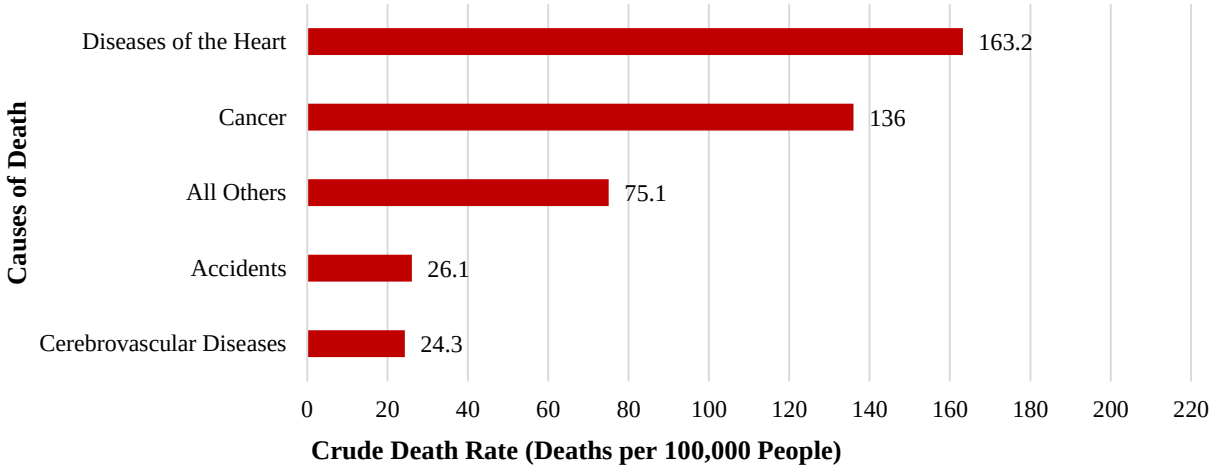
The top five causes of cancer death for the District and those for the study area differed somewhat. However the leading cancer cause of death for both the 20024 zip code and the District overall was lung cancer (Figures 3.13 and 3.14). For cancer deaths, the study area had a slightly higher death rate for lung cancer than the District overall. In zip code 20024, the top five cancer causes of death were: lung; liver; colorectal; pancreatic; and prostate cancer. Alternatively, for the District: lung; colorectal; breast, and pancreatic cancer; were the leading causes respectively, with 'other causes of cancer' ranking as the fifth leading cancer cause of death.

Figure 3.11: 2014 Top Five Leading Causes of Death, Buzzard Point CHS Assessment Area



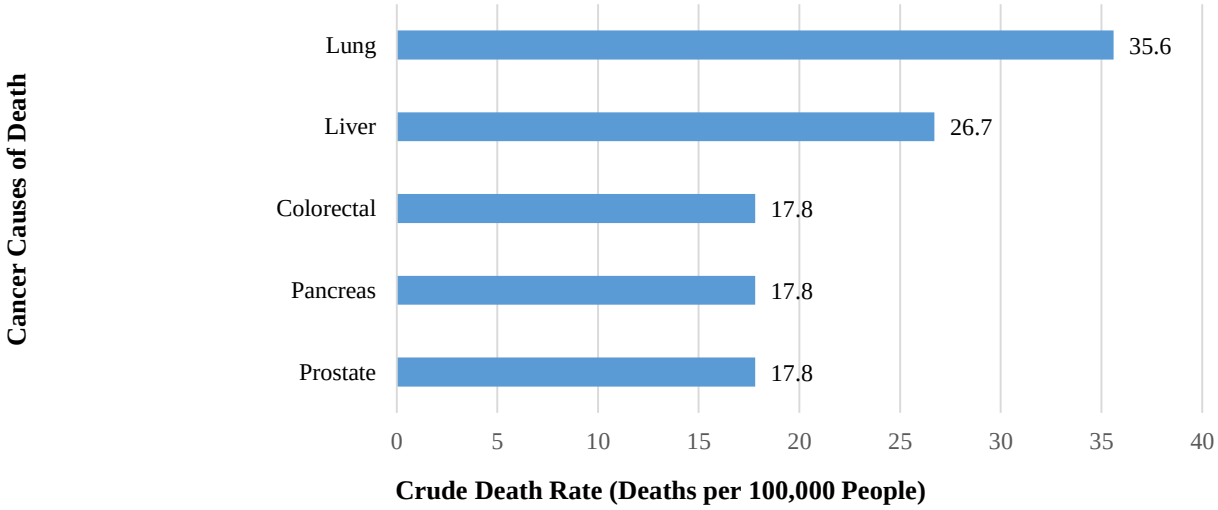
Data Source: DC Vital Records and the Data management and Analysis Division, Center for Policy, Planning and Evaluation, DC Department of Health. (2014). Cancer Mortality Data.

Figure 3.12: 2014 Top Five Leading Causes of Death, District of Columbia



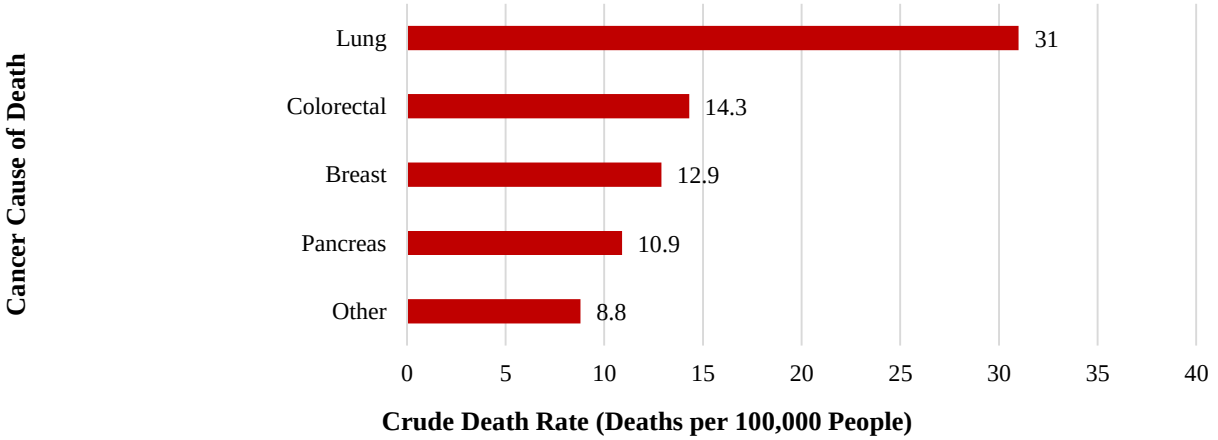
Data Source: DC Vital Records and the Data management and Analysis Division, Center for Policy, Planning and Evaluation, DC Department of Health. (2014). Cancer Mortality Data.

Figure 3.13: 2014 Top Five Cancer Causes of Death, Buzzard Point CHS Assessment Area



Data Source: DC Vital Records and the Data management and Analysis Division, Center for Policy, Planning and Evaluation, DC Department of Health. (2014). Cancer Mortality Data.

Figure 3.14: 2014 Top Five Cancer Causes of Death, District of Columbia



Data Source: DC Vital Records and the Data management and Analysis Division, Center for Policy, Planning and Evaluation, DC Department of Health. (2014). Cancer Mortality Data.

CHS Assessment Conclusion

The review of health outcomes for **Buzzard Point CHS Assessment Area** in general (20024 zip code), indicate similar health outcomes compared to the District of Columbia overall for several indicators. However, by some health measures, there were slight differences. Though the top five causes of death for the District as a whole and those for Buzzard Point were similar, the data shows higher death rates for diseases of the heart and cancer, in Buzzard Point than across the district. Chronic lower-respiratory diseases are shown to be among the five leading causes of death in Buzzard Point which is not indicated for the District of Columbia, where the data show cerebrovascular disease as the number five cause of death for the entire District. Also, the top five causes of cancer death for the District of Columbia and those for Buzzard Point were slightly different. Buzzard Point had a slightly higher death rate for lung cancer and general medical discharges than the District overall. Buzzard Point also had a slightly higher rate of general medical discharges than the District overall. This notwithstanding, residents of Buzzard Point indicated they had slightly higher 'good or better' health compared to all District residents. Smoking was slightly less prevalent in Buzzard Point than for those in the District overall. Also, Buzzard Point has a substantially lower proportion of children diagnosed with abnormal blood lead levels compared to the District overall. It is not possible, however, to make a definitive determination of cause and effect for health outcomes observed in surveillance data or as reported by residents.

Overall, even though there are differences indicated between the disease rates for the District and Buzzard Point, they are based on a very small number of occurrences. In many instances, the case counts for five years are not more than a total of 20 cases. Though the findings show that some cancer incidence and mortality rate trends, as well as chronic lower respiratory diseases, appear to run counter to the District trends, and could raise some concern, we conclude that there are no significant elevations of cancer or other health conditions in Buzzard Point, as compared to the rest of the District of Columbia.

The discussion of economic and social data for the **Buzzard Point CHS Assessment Area** as a whole, which like the health outcomes data was based on the whole of zip code 20024, presented a picture that was for the most part, remarkably similar to the District of Columbia as a whole. Key demographic differences related to the zip code having a smaller proportion of the population than the District that are Hispanic or Latino (5.7% vs. 9.9%); and a smaller proportions of children, both under and over five years old (under five = 3.5% vs. 6.1%; and 5-14 = 4.8% vs. 8.4%). Adults not only make up a larger proportion of CHS Assessment Area residents, than for the District as a whole; but seniors comprise a larger share at 15.5% of the population, verses, 11.3% for the District.

More dramatic differences are observable however, in terms of the social wellbeing of residents in US Census Tract 64, which approximates the Buzzard Point Neighborhood. The data underscores the elevated historic and contemporary vulnerability of Buzzard Point Neighborhood residents by comparison both with their immediate neighbors on the rest of the Peninsula, as well as with that of the District of Columbia as a whole.

These measurable vulnerabilities, indicate the potential absence of protective factors essential to community resilience, in the face of extended physical and social disruption generated by perpetual construction during multi-year, multi-phased redevelopment activity. In order to mitigate against the potential and/or cumulative impact of less tangible–but real—social determinant of health stressors that might be faced by especially vulnerable residents, the District must redouble its efforts to minimize impacts, in order to assure their community health and safety.

Part 4: Hazard Assessment & Control

The purpose of this section is to provide a summary of potential hazards that could impact human health, cause accidents or damage both onsite and beyond project boundaries. This summary should include accounts of all identified potential hazards, plus specific measures intended to prevent and control these potential risks to the community; and should have an associated plan and/or mechanism for monitoring.

Soil and Water Contamination

The Voluntary Cleanup Program (VCP) is administered by DOEE and is a District of Columbia program aimed at encouraging the redevelopment and reuse of environmentally-impacted properties, colloquially known as "brownfields." Although there are various definitions of brownfields, the EPA web site defines it as "real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant."

Under the District's VCP, private parties that voluntarily agree to clean up a contaminated site are offered liability protection in the form of a letter or certification indicating that no further action is required at the site, and that the state will not bring an enforcement action against the property owner for the known contamination. The District's VCP program creates incentives for cleanup and redevelopment of contaminated property, developing effective and consistent cleanup standards and processes, and promoting economic development by encouraging the reuse of contaminated properties.

The site proposed for the DC United Stadium is enrolled in the VCP because of documented petroleum releases and reported chemical concentrations. As part of the VCP, the site will be remediated by removing contaminated soil that would pose a risk to human health and/or environment. This remediation will occur before the construction of the stadium.

Haley & Aldrich Inc., an environmental assessment company hired by McKissack & McKissack Inc. (the company managing the construction of the stadium) conducted three environmental site assessments (ESAs) around the Buzzard Point community. Based on the results of the ESAs conducted, and as a supplement to the VCP, Haley & Aldrich Inc. released a voluntary cleanup action plan (CAP) in August of 2015, which summarizes the chemicals of potential concern along with proposed mitigation and clean-up efforts at each site. A revised cleanup-action plan was prepared in September 2015 based on comments received from The District's Department of Energy and Environment and DC United.

Areas of Potential Concern (AOPC)

Areas with soil sample analytical results exceeding the recommended screening levels were designated as areas of potential concern (AOPCs) and may require remediation. These AOPCs represent areas where the identified chemicals of potential concern (COPC) are at concentrations in soil and groundwater that exceed the screening level. A chemical concentration that exceeds the screening level does not necessarily indicate a potential threat

to human health or the environment (water quality), but will initiate the process of conducting a human health risk assessment (HHRA) and chemical leaching potential evaluation to further examine potential risk. The Specific AOPC locations are shown in Appendix 8.

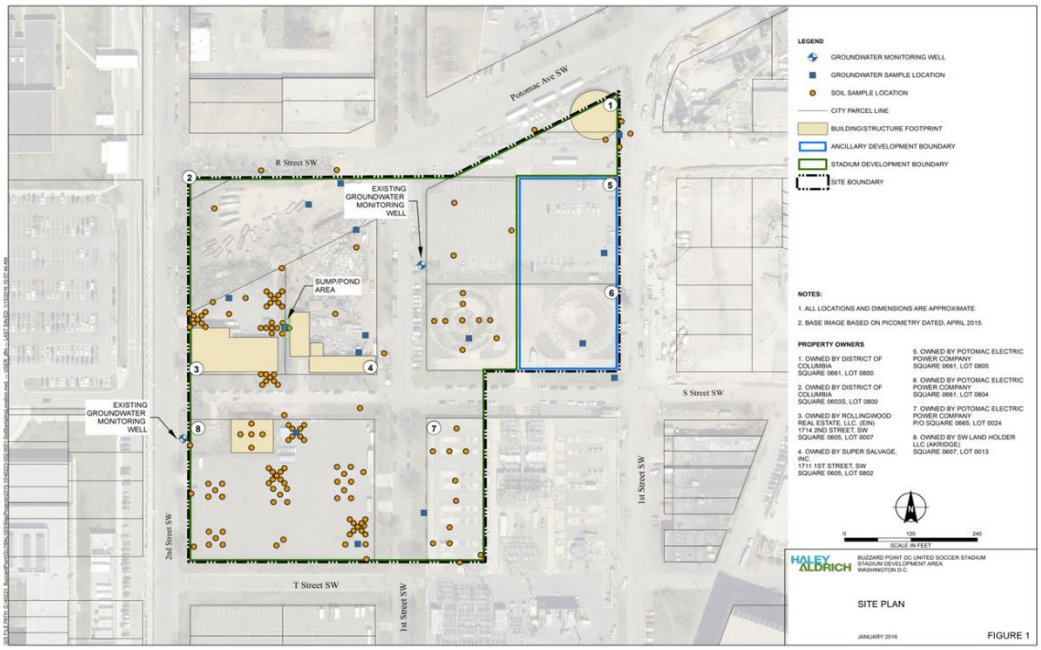


Figure 4.1: ESA Soil and Ground Water Locations
*(Please see **Appendix 8** for larger version)*

The site was divided into two areas: The Stadium Development area, and the Ancillary Development area. This discussion will be focused on the CAP and revised CAP prepared for the stadium development area.

According to construction plans, site excavation will be no deeper than 10 feet below ground surface (bgs) for foundation construction, so soil containing chemicals deeper than 10bgs and groundwater will not be encountered by construction workers. As such, only soil within the top 10 feet was considered for remediation.

Chemicals of Potential Concern (COPC)
Samples were collected from areas identified as potential environmental concerns based on historical and current site operations (previous investigations have occurred since 1990), as well as site accessibility (refer to **Appendix 8**). These investigations identified the following five (5) chemicals of potential concern (COPCs).

- Volatile organic compounds
- Semi-volatile organic compounds
- Total petroleum hydrocarbons
- Polychlorinated biphenyls; and
- Metals.

A summary of these five COPCs, including possible health effects, are provided in ***Appendix 9***.

The levels of the COPCs were then analyzed and compared to EPA and DC regulations and standards.

- Soil sample analytical results were compared to DC Tier 0 Standards and the Environmental Protection Agency (EPA) Regional Screening levels for Industrial Soil from the EPA Regional Screening Level Tables.
- Groundwater sample analytical results were compared to DC Tier 1 Risk-based groundwater screening levels (for both inhalation of the resident child and dermal contact of the construction worker) from the Risk-based Corrective Action Technical Guidance and EPA regional maximum contaminant levels from the EPA Regional Screening Level (RSL) Summary Table.

The EPA Regional screening levels are normally used at remediation sites to make a determination on the following:

- If contaminants are present?
- If their levels are high enough?

And, therefore;

- If they need to be addressed?

Air Quality:

During construction, the land use of the project site would shift temporarily from its current light industrial and institutional uses to an active construction site. Construction activities would include operation of heavy equipment and storage of project-related materials, generating additional noise, dust, traffic and visual disruption that would have the potential to cause annoyance or irritation to adjacent parcels.

Part 5: Monitoring Program

This section presents a summary of the construction and operations monitoring programs designed to address all potential hazards as provided for individual elements, as well as the redevelopment project as a whole. This includes: soil and water quality; air quality; and other monitoring plans as deemed appropriate. The monitoring program elements should mirror the specific measures intended to control potential risks to the community; and their associated monitoring plans. Finally, as part of all monitoring that will be occurring during excavation, construction and afterwards (monitoring wells), DOEE advises that an important element of all plans, is the requirement to include provisions related to, immediate actions that will be implemented based on any exceedances of established limits. This will be the case with air, water, and sediment controls.

The following description of existing monitoring plans are presented below primarily for information purposes. However, many of the plans proposed are still under review by regulatory agencies as appropriate. Where this is the case, the following note, e.g. "***DOEE – Air Quality Program is currently reviewing"*** **–** has been added to advise readers of this fact.

The summary below depicts the monitoring program plans as outlined by W.M. Schlosser, the District's contractor for the infrastructure and public realm work, and Turner Construction, DC United's contractor for the stadium construction. Currently, monitoring plans are being reviewed by the relevant DC Government Agency that has regulatory authority.

W.M. Schlosser Monitoring Programs *(DC General Contractor)*

Dust Control ***(DOEE – Air Quality Program is currently reviewing)***
As outlined in the dust control monitoring plan for the DC United Soccer Stadium infrastructure work, Schlosser will be following DC Municipal Regulations Rule Number 20-605 "Control of Fugitive Dust" which includes, but is not limited to the following:

- Keep paved roads, paved roadways, and paved parking lots in a reasonably-clean condition through frequent use of water, sweeping, or other means; through reasonably frequent removal of accumulated dirt from curb-side gutters; through reasonably prompt temporary repair of pavement; or through any other means.
- In the case of vehicles transporting dusty material or material which is likely to become dusty, fully cover the material in question, with a tarpaulin or other material.
- Load trucks so that there is no spillage of materials onto roadways. Clean off tailgates before leaving work zones.
- Caution drivers to observe posted speed limits. As an option, the Contractor may consider adding speed bumps at certain locations to lower speed.

Air-Quality Monitoring ***(DOEE – Air Quality Program is currently reviewing)***
During the utility excavation and backfill operations (Phase 1), Schlosser will set up four (4) continuous air monitoring stations around the perimeter of the work areas, during the work hours, using the TSI DustTrak II Model 8530 which is mounted on a tripod and is battery operated. The equipment is capable of data-logging and the Contractor will submit reports on a weekly basis.

Turner Construction Monitoring Programs *(DC United General Contractor)*

Dust Control ***(DOEE – Air Quality Program is currently reviewing)***
Dust control will be very important during the DC United Soccer Stadium construction. Turner Construction will implement measures to control construction related dust generation and disbursement.

Turner Construction's dust control measures will be enacted in order to insure minimal impact to the surrounding Buzzard Point neighborhood. The dust control procedures will include:

- Baseline air testing performed prior to start of construction.
- Equipment, activities, and work operated or performed shall be in strict accordance with the state and local air pollution statutes and Federal emission performance laws and standards. (See Figure 5.1 below)
- Air testing will be performed on a periodic basis throughout construction to ensure that air quality levels are within the allowable limits.

Figure 5.1: Dust Control Monitoring Equipment (Illustrative Only)

- Air-quality monitors will be placed throughout the job site to take periodic samples.

- Water trucks will be used as necessary to keep the ground moist and minimize dust as shown in Figure 5.2 below.

Figure 5.2: Dust Control Water Trucks (Illustrative Only)

- At the completion of the excavation and backfill phase, stone will be placed over the most traveled areas of the site to minimize airborne dust particles and control the amount of dirt and mud that leaves the site.
- Following the foundation and earthwork phase (structure and building phase), Turner Construction will make efforts to have all applicable material prefabricated prior to its arrival on the jobsite in order to minimize the amount of cutting and/grinding required.
- Areas will be designated for all cutting operations. All dust producing operations such as grinding, scaling, or chipping shall utilize certain shields, water spray, or other procedures of accepted good practice to minimize generation and/or migration of dust from the construction sites.

Stormwater Pollution Prevention Plan (SWPPP*) (DOEE – Air Quality Program is currently reviewing)*

Turner Construction will provide a Stormwater Pollution Prevention Plan; a required written plan developed by the project engineer and reviewed by Turner's in-house Sediment and Erosion Control Specialist specifically for the construction project prior to the start of construction activities.

This plan will incorporate, a Stormwater Pollution Prevention Plan (SWPPP) which, will be developed in compliance with the EPA standards and any other applicable local and federal codes.

Sediment and Erosion Control *(DOEE – Air Quality Program is currently reviewing)*

In order to address erosion and sediment control on the DC United Soccer Stadium site, Turner Construction will assign a certified, responsible person to be on the site daily through the ground disturbance period who is responsible to inspect the sediment and erosion control measures, and enforce the sediment and erosion control and storm water pollution prevention

plans. All Inspections will be completed on a weekly, post rain/snow event, and random basis and will be documented electronically and any issues noted and corrections logged. Photos shall be taken as part of the inspection process. The SWPPP will be updated as necessary based on differing site conditions based on the phase of construction.

The site specific Sediment and Erosion control plan will be in compliance with the Department of Energy and Environment (DOEE) standards, reviewed with the project team and the project site.

Construction Traffic Management

As a part of Turner Construction's traffic management plan, Turner will review the acceptable means of egress to the construction site.

Figure 5.3: Construction Traffic Management Plan *(Illustrative Only)*

All subcontractors will be held to the approved Traffic Management Plan (TPC) in effect by means of an "additional provisions clause" executed in the contract.

Haul roads, parking areas, storage yards or any large bare areas that could contribute to wind-born dust problems shall be: sprinkled with water, covered with suitable restraining barriers, or treated with wetting agent to reduce the generation of dust.

Whenever possible, Turner Construction Company will encourage subcontractors and workers to use public transportation in order to minimize street parking around the surrounding site which will help minimize any street congestion.

In areas directly around the construction site where traffic will be impacted, Turner Construction Company or its subcontractors will provide District of Columbia certified flaggers to manage street operation.

Figure 5.4: Trucks Being Washed Before Leaving Work Zone (Illustrative Only)

Following completion of the project, all areas in and around the construction project will be cleaned and any damage caused by the construction process repaired/refurbished. In addition, the construction areas will be left in a clean condition and shall include off-site disposal of all excess material, debris, and rubbish.

Part 6: Community Quality of Life Considerations

The purpose of this section is to report on community quality of life considerations. Presented will be a review and discussion of how and when the project may generate noise, light, odor and traffic, highlighting project procedures to reduce nuisances.

Mitigation approaches include: management controls (e.g., restrict hours of operation); improved sharing of information; and empowering community members to be prepared to report non-compliance and submit complaints of nuisance issues. Examples can include: maintaining open communications with the community to inform them when work will be particularly loud, such as pile driving, demolition, etc. and/or notifying a construction/remediation "noise" schedule that is kept up to date.[9]

Noise

Potential sources

Noise, or unwanted sound, that would be associated with the proposed project would originate from temporary stadium construction activities, such as large construction vehicles, driving of steel piles, and other large machinery, and the vehicular traffic heading to and from the stadium during game day.

Measures to reduce

In one part of the Buzzard Point redevelopment area, a noise alert level was established for a decibel range approaching 80 dB and an action level at a decibel level greater than 80. The Centers for Disease Control and Prevention (CDC) states that levels over 85 dB may cause hearing loss if exposed to for more than 8 hours each day. Noise monitoring devices should be placed on the construction site and wherever is feasible and appropriate in the area of the community most affected by the construction noise. If noise levels are close to 85 dBs in the vicinity of community members/residential areas for an extended duration, construction should be temporarily halted and appropriate mitigation measures taken to reduce the noise in order to limit the impact on human health.

Light

Potential sources

Some project activities have the potential to generate additional light. Temporary additional sources would be associated with stadium construction and would originate as a result of specific tasks, in specific locations. More permanent and long-term additions would occur during operation and would be generated during game days and other events.

Measures to reduce

Community members affected by the Buzzards Point construction should be given advance warning if any excessive use of lighting is planned due to time-sensitive operations. If a community member feels directly impacted by excessive light that is limiting sleep or other

[9] https://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/handbook07.cfm

necessary human functions, he/she should contact a community outreach liaison for the construction company and file a complaint so that mitigation measures can be considered. Additionally, if applicable for longer-term impacts, consideration should be given to providing light-blocking solutions.

Traffic

Potential sources

The construction team will rely on trucks and other large vehicles for the transport of sediment during soil remediation as well as equipment and materials during stadium construction. These vehicles will be temporary but necessary, traveling on local streets and highways.

Measures to reduce

Traffic Control Plan (TCP) Phasing Summary: Joint DC United Soccer Stadium & Pepco Substation Sites (DRAFT July 2016)

In order to prevent and/or reduce traffic impacts, to meet the goal of ensuring resident, pedestrian, motorist and worker safety, a joint Traffic Control Plan (TCP) Phasing Plan for the DC United Soccer Stadium and Pepco Substation Sites was developed for the initial phase of construction (July to September 2016). The plan includes the application and enforcement of three complimentary measures, including "Work Zone" designation; exclusion of construction trucks from residential areas; and street access modifications and closures as summarized and illustrated in Figure 5.5 below. The District's infrastructure construction work is expected to be completed by fall 2016. Pepco's infrastructure construction is expected to be completed by spring 2017. Future phases of soccer stadium construction work will generate separate TCPs and phasing plans as needed.

1. Work Zone Designation

The construction area for the DC Soccer stadium includes roads that will be closed to the public within the segment adjacent to:

- 2nd Street (East Side) and Half Street (West Side); and
- R Street (North Side) and T Street (South Side)

Specific details of the work zone designation, including enforcement, will be as detailed in the approved Traffic Control Plan, which will specify traffic control methods and device requirements, including their time of operation (start and stop times) during the course of each workday, as well as the days of the week to which they apply.

Additional Details:

- **Enforcement:** Proactive enforcement will occur within the Work Zone area surrounding the DC Unites Stadium and Pepco Sites.

- **Signage:** Orange and Black signs will be displayed at various locations to identify the work zone area, and to promote compliance.
- **Speed Reduction:** Speed limits will be lowered by an additional 10 miles/hour in the work zone area.
- **Traffic Calming:** A '4-way-traffic' sign will be added at intersection of Potomac Ave. and Half Street.
- **Air Quality Protection:** "No Idling" signs will be installed at various locations surrounding the DC United and Pepco sites.

2. Residential Neighborhood Protection:

No construction truck activity will be permitted in the residential neighborhood. Contractors are not permitted to use residential parking spaces, including residential parking permit spaces for construction worker parking. Contractors will not be permitted to use neighboring residential areas around the soccer stadium construction project as truck staging areas and/or truck routes. The exclusion of construction truck activities specifically includes:

- Q Street, SW
- P Street, SW
- O Street, SW
- First Street, SW

3. Street Access Modifications:

- Utility construction will necessitate closing of several sections of streets:
    - Half Street between S and R will be closed during daytime hours
    - Half Street between R and Potomac will be closed during daytime hours
    - Sections of Potomac Avenue will be closed between 1st Street and Half Street. Some sections will be closed during the day and night
    - R Street between 1st and 2nd will be closed day and night
- Schlosser, the District's General Contractor (GC) to provide entryway for Capitol Business Supply during business hours
- Businesses on Half Street will be accessible via detours
- Half Street to be plated-over at night to allow access to these business
- Vehicle detours:
    - Local vehicular traffic (only) will be rerouted to Q Street
    - Concrete plant traffic (only) will use a combination of Half Street, R Street and South Capitol Street
    - Construction traffic (only) will use Potomac Avenue and 1st Street south of Potomac
- All construction and concrete/aggregate trucks will enter and exit the neighborhood via Potomac Avenue and South Capitol Street

Figure 5.5: Joint Traffic Control Plan (TCP) Phasing Summary (July to September 2016) - DC United Soccer Stadium & Pepco Substation Sites (Draft July 2016)

Part 7: Emergency Preparedness & Response Planning

The purpose of this section is to provide a summary of preventative measures in place for spills, accidents and injuries; including the safety measures and procedures in place to respond to emergencies should accidents occur.

DC United's contractor, Turner Construction has developed health and safety policies required for the prevention of injury and job related illnesses to personnel who will perform activities within the DC United Soccer Stadium scope. As noted in the Health and Safety Manual, effective implementation of Turner's policies and procedures will require a full commitment from senior management in order to ensure compliance. A business unit safety director, project manager, project superintendent, and project safety manager will be on-site during the DC United Soccer Stadium construction.

In order to ensure public safety and site security, prominent project signage will be displayed at the perimeter fencing that outlines the proper entrances and exits. In addition, a check-in policy and proper protection gear is required to enter the site.

A six-foot high fence with scrim will be installed around the perimeter of the project. In addition construction gates will be kept closed, to the greatest extent possible, and the gates will be locked after normal working hours.

A Turner Construction staff person will walk the site at the end of the day. A Turner Construction staff person will verify that gates are closed, there are no gaps in fences, machines have been turned off and keys removed, no running water is on, and all personnel have left the jobsite.

Part 8: Public Notification & Participation

The purpose of this section is to provide a directory for addressing complaints about project-related noise, light, odor and other impacts; and how residents and the community will be informed of project status updates.

Summary of Public Notification and Participation
While the varying monitoring plans outlined in **Part 6** and **Part 7** of this report speak to details regarding technical assurance and reporting to regulatory agencies with respect to soil, water and air quality, etc., these are specific to only the Soccer Stadium development. Similar plans and measures will also be developed for each of the other projects as appropriate, within the Buzzard Point Redevelopment Program. Technical oversight and monitoring by regulatory agencies will be key to assuring community health and safety, through the development cycle and beyond.

Currently, however, there is no clear and comprehensive articulated communications strategy or plan for public notification and participation with respect to the Buzzard Point Redevelopment program as a whole. Individual project owners and their consultants have engaged and responded in a variety of ways, but not always in proactive, consistent or collaborative ways. An integrated and consistent communication strategy, that supports ongoing community engagement and participation would go a long way to facilitate resident understanding of this very complex, highly technical, multi-phased redevelopment program. Addressing this gap is important to building community trust.

Part 9: CHASS Recommendations

The purpose of this section of this Buzzard Point CHASS Report, is to present recommendations as needed to address and assure community health and safety in the vicinity of Buzzard Point.

In conclusion, the following **five (5)** recommendations are made based on the findings of this CHASS Report. As noted in Part 3, the data on health outcomes do not indicate statistically significant elevations of cancer or other health risks. However, it is also not possible to make a definitive determination of cause and effect for health outcomes observed in surveillance data. The recommendations below therefore include continued monitoring of community health status through the construction period. Specifically, this recommendation identifies the need for monitoring of health outcomes related to asthma, acute respiratory diseases, heart disease and stroke.

The societal data are suggestive of social vulnerabilities with respect to the Buzzard Point neighborhood. They are telling of the potential absence of protective factors essential to community resilience, in the face of extended physical and social disruption generated, as anticipated by construction during multi-year, multi-phased redevelopment activity through 2018 and beyond. In order to mitigate against the potential and/or cumulative impacts of less tangible -- but real -- social determinants of health stressors that might be faced by especially vulnerable residents, the District and the private sector must redouble its efforts to minimize adverse impacts to quality of life especially during pre-development and construction, in order to assure community health and safety.

Where appropriate, the **five (5) overarching recommendations** are presented with respect to both immediate needs, as well as longer term solutions proposed for consideration. Immediate improvements are essential in order to protect the current resident population, especially those residing in the south-eastern quadrant of the peninsula, known as the Buzzard Point Neighborhood. Immediate requirements are improved program coordination and management of public and private multi-year redevelopment projects. Also needed is enhanced community engagement practices that are proactive, regularly convened, updated and sustained. Close attention to monitoring and enforcement of existing permits, regulations and policies will be especially critical during the extended multi-year project implementation and construction period and beyond.

Consideration of the longer-term solutions prescribed, point to the need for more systemic policy, practice and process improvements that enhance the protection of community health and safety in general during economic development, across the District as a whole. In particular, they underscore a broader role for all district agencies, including the private sector in protecting health, and preventing disease, while developing healthier communities within a health in all policies framework.

Earning community trust through proactive engagement, timely notification and exemplary enforcement, will go a long way. Investment in these priorities are critical to the protection and assurance of residents and neighborhoods with respect to community health and safety in the vicinity of Buzzard Point.

Recommendations:

1. **Improved program coordination, to include all project components and constituent construction projects to minimize impacts on the community.**
   - **Immediate Improvements:** The Buzzard Point Redevelopment Program is a large multi-year initiative, demanding the involvement of multiple agencies including public and private entities, each with varying roles, functions, priorities, and timelines, as well as personnel and project managers. One challenge that has characterized participation throughout the course of this CHASS process, has been the volume and complexity of plans, proposals, competing timelines and deliverables, including their interdependency. However, each of the five (5) key projects are mostly being implemented in separate siloes, with limited real-time practical coordination. There is therefore an immediate need for improved, more streamlined processes and procedures, in order to enhance and promote effective program coordination, collaboration and accountability across District agencies. Given the significant role of the private sector in successful delivery of the redevelopment program, as well as the need to assure that the legitimate concerns of community residents are properly addressed, program coordination efforts must include, private sector partners and entities in integrated coordination and streamlining efforts.
   - **Longer-Term Improvements:** District to consider developing criteria that would outline the types of projects requiring completion of Community Health and Safety Plans (CHASP) in advance of final approval and the start of construction. Minimum CHASP standards would need to be developed; as would reasonable criteria related to size, complexity and estimated risk that would necessitate a CHASP.

2. **Enhanced community engagement and notification with respect to program and project developments through regularly-scheduled public meetings.**
   - **Immediate Improvements:** This CHASS was initiated as a response to the Buzzard Point community's desire to better understand the potential health and quality of life impacts posed by such a large and complex project with multiple agencies, contractors and regulations involved. Enhanced community engagement and notification with respect to the overarching redevelopment program, as well as more details related to individual project component developments would go a long way in improving resident understanding and assurance regarding both generalized and specific proposals for the improvements envisioned. There is a need for the immediate development of a proactive public outreach strategy that includes

regularly scheduled meetings, essential to promote timely, meaningful, and sustained community engagement. This is essential to facilitate dissemination of information, promote understanding and involvement, and to actively solicit input and feedback to the process.

- **Longer-Term Improvements:** As recommended above, District to consider developing criteria that would outline the types of projects requiring completion of Community Health and Safety Plans (CHASP) in advance of final approval and the start of construction. Documentation of community engagement efforts prior to submission, as well as a comprehensive strategy, that is proactive with specific provisions to assure regular and timely community notification are critical components of the CHASP requirement standards envisioned.

3. **Provide for proactive development of prevention and control measures, as well as enforcement of policies and regulations to control dust and improve air quality**
   - **Immediate Improvements:** The area to the immediate south of the Buzzard Point residential neighborhood has been characterized as mostly industrial for several decades. Over the years, many of the complaints from local community residents have been associated with fugitive dust emissions from the processes of industrial facilities in the area, including the following: Superior Concrete Materials; Recycled Aggregates LLC; and Vulcan Materials Company. The Air Quality Division (AQD) of DOEE has conducted numerous inspections of this area and citations have been issued to some of these facilities for violations of the District's fugitive dust regulations. During the construction period and beyond, it is critical that proactive and diligent attention is paid to enforcement of existing policies and regulations. Immediate focused attention to addressing these problems must be a priority, as long standing problems are exacerbated by increased truck traffic during the construction phase. Leadership by the District, engaging all departments as needed, along with the private sector is essential in effectively overcoming these challenges.
   - **Longer-Term Improvements:** Some jurisdictions require dust control and monitoring plans be submitted for all industrial facilities and construction sites, regardless of potential hazard or size. Currently, at its discretion, DOEE requires dust control and monitoring plans depending upon the size of the project and potential environmental risk. Because these plans are not always specifically required or regulated, contractors are not obligated to develop, or submit these plans in a timely manner, which would allow for proper review, suggestions and resulting improvements. Clearly-articulated permit conditions that specify timeframes, expiration dates and re-approval requirements and criteria are critical. This would assure that best practices are consistently applied.
     In the longer term, it is recommended that DOEE develop regulations that determine the size and type of projects that will require a dust monitoring and control plan, as

well as an adequate timeframe for it to be submitted, prior to the start of operations of construction.

4. **Develop ongoing field monitoring of soil, water and air quality**
   This assessment determined that chemical concentrations in certain pockets of the soil at the DC United soccer stadium site may pose some risk, as measured by elevated readings. Therefore, it is necessary to ensure that areas with soil sample analytical results exceeding the screening levels are appropriately remediated. All groundwater within the District is classified as Class G1 that is considered to be highly vulnerable to contamination, therefore regular monitoring must be conducted. In order to minimize the impacts of poor air quality due to construction and presence of volatile organic compounds, best management practices such as dust control must be ensured. We recommend periodic air testing to determine impact of pollution generated by construction activities to ensure that air quality standards are met for pollutants.

5. **Conduct continued monitoring of Community Health Status through the construction period.**
   Though this review showed that the **Buzzard Point Community Health Status (CHS) Assessment Area** in general has similar health outcomes compared to the District of Columbia overall for several indicators, there were slight differences in some health outcomes. Since exposures to environmental contaminants could lead to significant health problems, continued monitoring is of primary importance. Reducing air pollution levels can reduce the burden of disease from stroke, heart disease, lung cancer, and chronic and acute respiratory diseases. The lower the levels of air pollution, the better the cardiovascular and respiratory health of the population will be. We therefore recommend continued monitoring of community health status through the construction period. Specifically, the monitoring of the following health outcomes should be addressed:
   a. Asthma
   b. Acute respiratory diseases
   c. Heart disease
   d. Stroke

REFERENCES

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3. **Haley & Aldrich Inc. (2015). Revised Cleanup Action Plan, D.C. United Soccer Stadium Development**
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4. **Haley & Aldrich Inc. (2015). Revised Cleanup Action Plan, D.C. United Soccer Stadium Development – Executive Summary** (No. 40223-002). McLean, VA.
   http://dmped.dc.gov/sites/default/files/dc/sites/dmped/page_content/attachments/Revised%20Cleanup%20Action%20Plan%20ExecutiveSummary%20(10-13-15).pdf (*Retrieved, April 4, 2016)*

5. **Volatile Organic Compounds' Impact on Indoor Air Quality (EPA)**
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7. **CDC –ATSDR Toxic Substance Portal – Polychlorinated Biphenyls (PCBs)**
   http://www.atsdr.cdc.gov/toxfaqs/TF.asp?id=140&tid=26 *(Retrieved, April 4, 2016)*

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   http://www.atsdr.cdc.gov/substances/toxchemicallisting.asp?sysid=33 *(Retrieved, April 4, 2016*

CHASS APPENDICIES:

Appendix 1: CHASS Scope – January 15th 2016

Appendix 2: Buzzard Point Community Health Status (CHS) Assessment Area

Appendix 3: Cultural Resources Map

Appendix 4: Buzzard Point Redevelopment Map

Appendix 5: Existing Land Use

Appendix 6: DC United Soccer Stadium Site

Appendix 7: Stadium Project Construction Timeline

Appendix 8: Areas of Potential Concern (AOPC), Soil & Ground Water Locations

Appendix 9: Chemicals of Potential Concern (COPC) & Possible Health Effects

Appendix 1: CHASS Scope – January 15th 2016

BUZZARD POINT CHASS **Draft Scope for Review** **January 15th, 2016**	**SCOPE:** ***Develop a Community Health and Safety Study (CHASS) to address potential community health and safety issues for the public in the vicinity of multi-phased voluntary cleanup and redevelopment at Buzzard Point, District of Columbia***
Key Project Tasks:	**Activities & Output**
1. Project Summary	Provide Overview of CHASS purpose, process and major project components.
2. Project Schedule	Summarize the proposed sequence of project activities, including overall phases and schedules; proposed hours of operation and approximate duration of each major phase and activity.
3. Current Community Health Status	Descriptive Analysis and summary of current health status of community (including comparison to Ward 6, DC at large, and national averages). Review and discussion of existing report findings.
4. Hazzard Assessment and Control	Review & Summary of the potential hazards that could impact human health, cause accidents or damage both onsite and beyond the project boundaries. Will be based on information provided on how the project is designed to reduce the likelihood of adverse effects and accidents.
5. Monitoring Program	Review & Summary of the construction and operations monitoring programs as submitted regarding the detailed descriptions provided in the Air Monitoring Plan, etc.
6. Community Quality of Life Considerations	Review and Discussion of when and how the project may generate noise, light, odor, air quality and traffic with an emphasis on how the project is designed to reduce and mitigate these nuisances
7. Emergency Preparedness and Response Planning	Review & Summary of Preventative measures in place for spills, accidents and injuries and what safety personnel and procedures planned and/or in place to respond to an emergency should and accident or incident occur.
8. Public Notification & Participation	Review & Summary of Process for addressing complaints about project-related noise, light, odor and other impacts, how the community will be kept informed about project status, monitoring results and other information and public information materials.
9. Report & Recommendations	Prepare a report on the CHASS review results, with recommendations as needed to address and assure community health and safety.

Appendix 2: Buzzard Point Community Health Status Assessment Area

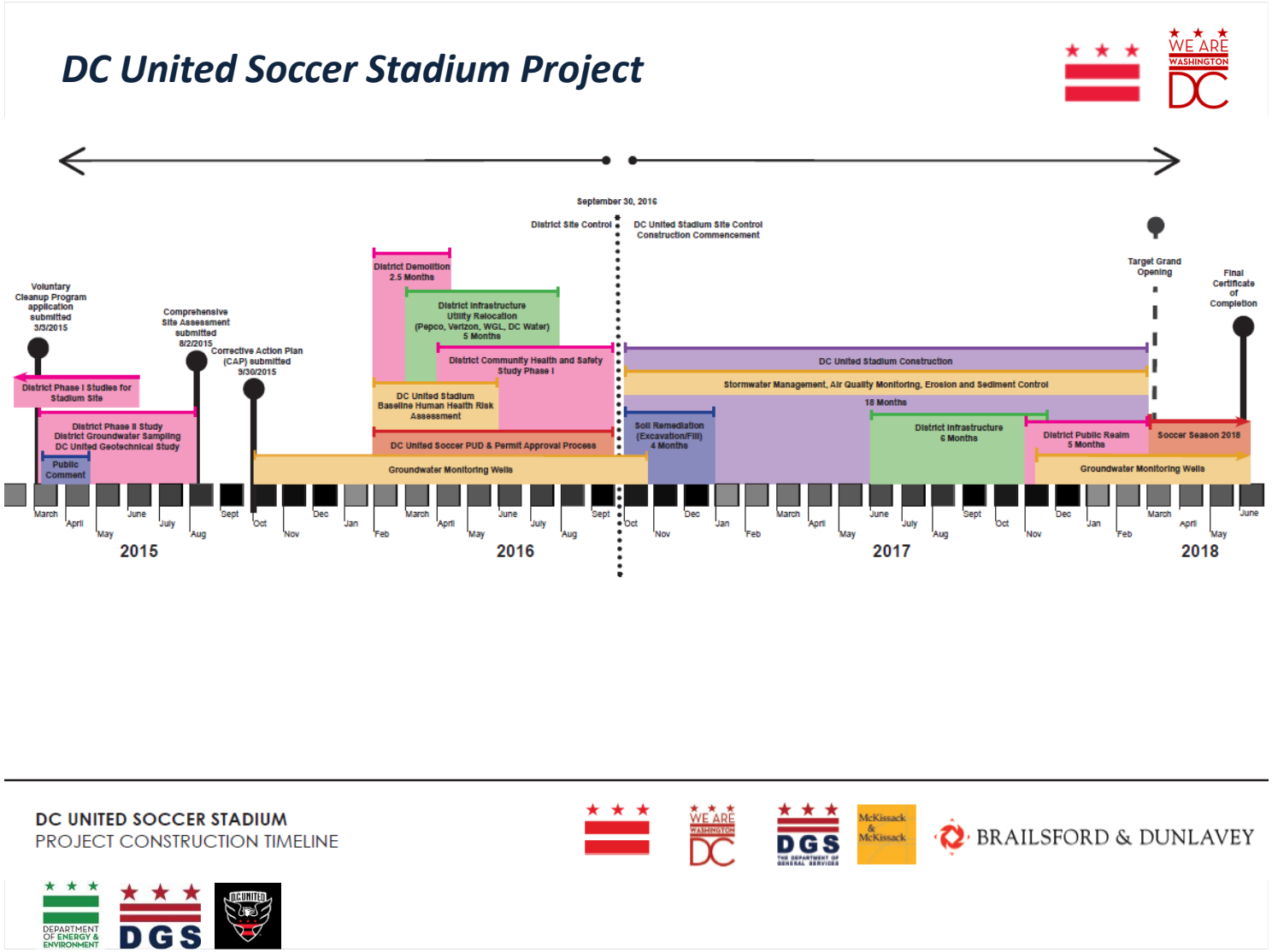
Appendix 3: Cultural Resources

Appendix 4: Buzzard Point Redevelopment Map

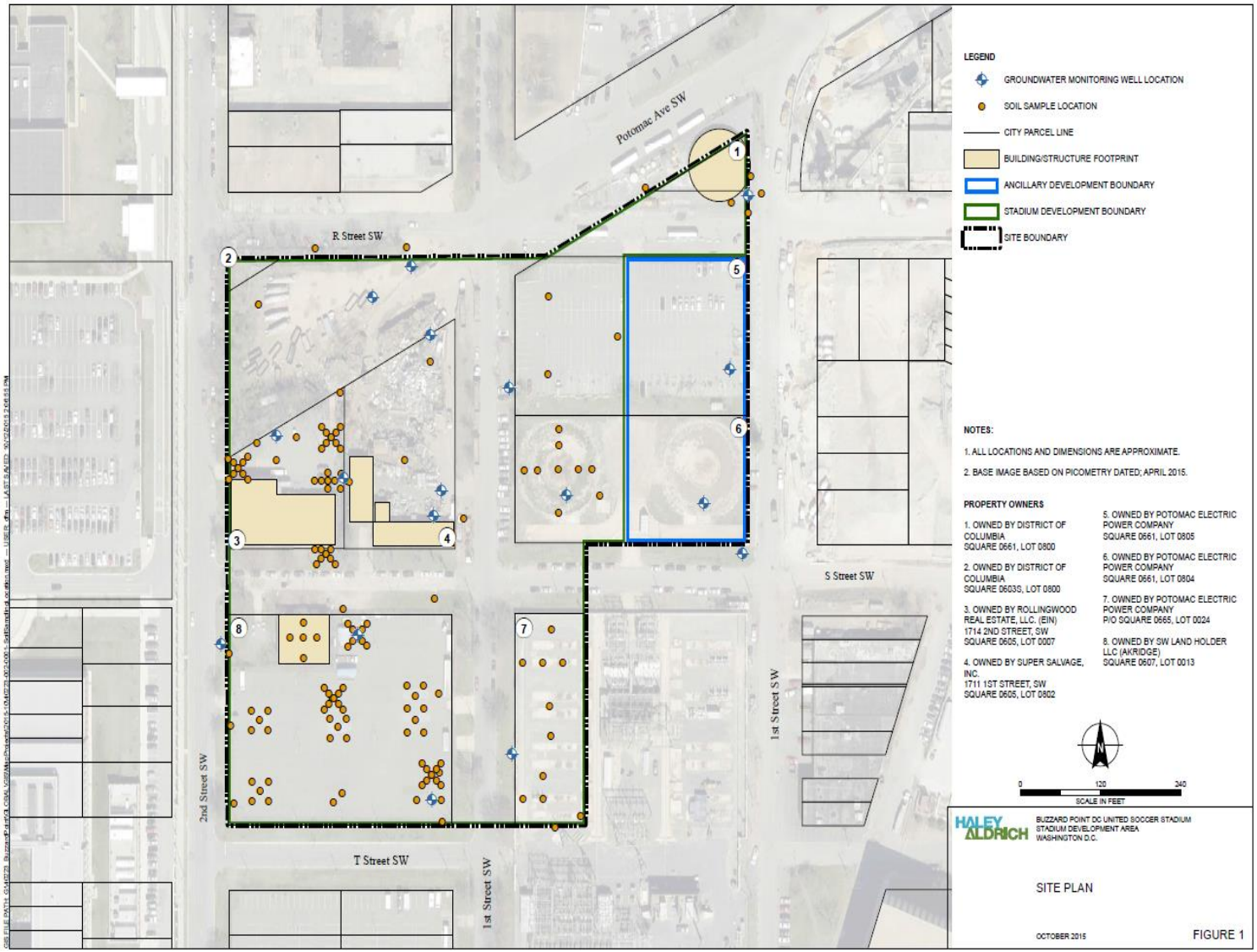
Appendix 5: Existing Land Use

Appendix 6: DC United Soccer Stadium Site

Appendix 7: Soccer Stadium Construction Timeline 2016-2018



Appendix 8: Areas of Potential Concern (AOPC), Soil & Ground Water Locations



Appendix 9: Chemicals of Potential Concern (COPC) & Possible Health Effects

COPCs	*Possible Health Effects*
COPC1 & 2: Volatile organic compounds (VOCs) and Semi-volatile organic compounds VOCs are a class of chemicals that are volatile (evaporate easily) and are organic compounds (contain carbon atoms). Some common VOCs include acetone and automotive gasoline. Concentrations of many VOCs are consistently higher indoors (up to ten times higher) than outdoors. Organic chemicals are widely used as ingredients in household products as well as fuels. All of these products can release organic compounds while you are using them, and, to some degree, when they are stored.	***Possible Health Effects*** Some have short- and long-term adverse health effects which may include; eye, nose and throat irritation, headaches, loss of coordination and nausea, damage to liver, kidney and central nervous system with some organics having the potential to cause cancer in animals, with others suspected or known to cause cancer in humans. The ability of organic chemicals to cause health effects varies greatly from those that are highly toxic, to those with no known health effect. As with other pollutants, the extent and nature of the health effect will depend on many factors including level of exposure and length of time exposed.
COPC 3: Total petroleum hydrocarbons (TPH) Total petroleum hydrocarbons (TPH) is a term used to describe a large family of several hundred chemical compounds that originally come from crude oil. Crude oil is used to make petroleum products, which can contaminate the environment. Because there are so many different chemicals in crude oil and in other petroleum products, it is not practical to measure each one separately. However, it is useful to measure the total amount of TPH at a site. TPH is a mixture of chemicals, but they are all made mainly from hydrogen and carbon, called hydrocarbons. Scientists divide TPH into groups of petroleum hydrocarbons that act alike in soil or water. These groups are called petroleum hydrocarbon fractions. Each fraction contains many individual chemicals. Some chemicals that may be found in TPH are hexane, jet fuels, mineral oils, benzene, toluene, xylenes, naphthalene, and fluorene, as well as other petroleum products and gasoline components. However, it is likely that samples of TPH will contain only some, or a mixture, of these chemicals.	***Possible Health Effects*** Some of the TPH compounds can affect your central nervous system. One compound can cause headaches and dizziness at high levels in the air. Another compound can cause a nerve disorder called "peripheral neuropathy," consisting of numbness in the feet and legs. Other TPH compounds can cause effects on the blood, immune system, lungs, skin, and eyes. The International Agency for Research on Cancer (IARC) has determined that one TPH compound (benzene) is carcinogenic to humans. IARC has determined that other TPH compounds (benzo[a]pyrene and gasoline) are probably and possibly carcinogenic to humans. Most of the other TPH compounds are considered not to be classifiable by IARC.

COPC 4: Polychlorinated biphenyls (PCBS) Polychlorinated biphenyls are mixtures of up to 209 individual chlorinated compounds (known as congeners). There are no known natural sources of PCBs. PCBs are either oily liquids or solids that are colorless to light yellow. Some PCBs can exist as a vapor in air. PCBs have no known smell or taste. Many commercial PCB mixtures are known in the U.S. by the trade name Aroclor. PCBs have been used as coolants and lubricants in transformers, capacitors, and other electrical equipment because they don't burn easily and are good insulators. The manufacture of PCBs was stopped in the U.S. in 1977 because of evidence they build up in the environment and can cause harmful health effects. Products made before 1977 that may contain PCBs include old fluorescent lighting fixtures and electrical devices containing PCB capacitors, and old microscope and hydraulic oils.	***Possible Health Effects*** The most commonly observed health effects in people exposed to large amounts of PCBs are skin conditions such as acne and rashes. Studies in exposed workers have shown changes in blood and urine that may indicate liver damage. PCB exposures in the general population are not likely to result in skin and liver effects. Most of the studies of health effects of PCBs in the general population examined children of mothers who were exposed to PCBs. PCBs are not known to cause birth defects. The Department of Health and Human Services (DHHS) has concluded that PCBs may reasonably be anticipated to be carcinogens. PCBs have been classified as probably carcinogenic, and carcinogenic to humans (group 1) by the Environmental Protection Agency (EPA) and International Agency for Research on Cancer (IARC), respectively.
COPC 5: Metals. Inorganic substances are a group of chemicals that contain no carbon and include all metals, and most elements (such as calcium). Elements are a class of chemicals that are the simplest forms of matter; those elements in nature range from hydrogen to uranium. Metals (such as aluminum and silver) are elements that tend to be malleable (can be shaped or formed by hammering or pressure without breaking) and ductile (can be drawn into wires).	***Possible Health Effects*** In very small amounts, many of these metals are necessary to support life. However, in larger amounts, they become toxic. Health effects of metals are dependent on the exposure and concentration of specific elements.

Appendix 9 Sources:

https://www.epa.gov/indoor-air-quality-iaq/volatile-organic-compounds-impact-indoor-air-quality April 4, 2016
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