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Reuse and the Benefit to Community A Beneficial Effects Economic Case Study for the Calhoun Park Area Site

Introduction

The Calhoun Park Area site is located on the bank of the Cooper River near downtown Charleston, South Carolina. From 1855 to 1957, manufactured gas plant (MGP) operations at the site produced a gas that was used for heating, cooking, and gas lamps. As a byproduct, liquid coal tar was also produced that contaminated soil, sediment and groundwater. Cooperation between EPA, the South Carolina Department of Health and Environmental Control (SCDHEC), the City of Charleston, and South Carolina Electric & Gas (SCE&G), the site's potentially responsible party, resulted in the successful cleanup and reuse of the downtown properties. Site redevelopment has bolstered the local economy and introduced a variety of reuses to the area. Today, site uses include commercial, residential, public utility, educational, recreational and cultural uses.

Site restoration and reuse can revitalize local economies with jobs, new businesses, tax revenues and local spending. Cleanup may also take place while active land uses remain on site. This case study explores the cleanup and continued use of the Calhoun Park Area site, illustrating the beneficial effects of site redevelopment.

Beneficial Effects

Site businesses employ about 238 people, providing estimated annual employment income of almost \$16.6 million and generating about \$37.2 million in annual sales revenue.

Site properties are currently valued at about \$113 million and generate about \$1.5 million in annual property tax revenues.

Incorporation of a phased remedial approach allowed for the expedited cleanup and redevelopment of the site.

Cleanup involved innovative techniques that further protect the environment.

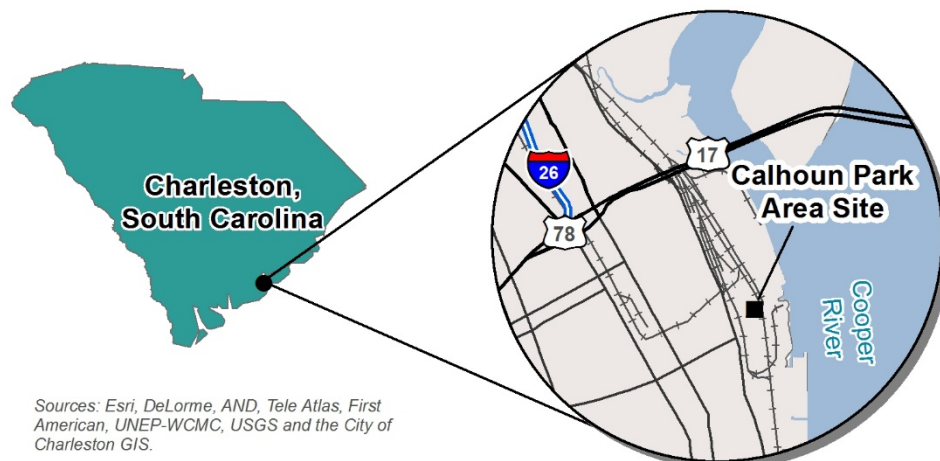


Figure 1. The location of the Calhoun Park Area site in Charleston, South Carolina.

Site History

The site is located on the Charleston Peninsula in South Carolina (Figure 1). The site is generally defined as the area bordered by Charlotte, Washington, Laurens and Concord Streets (Figure 7). The site is bordered by the Cooper River, an intermodal transportation and storage facility, a rail line, and light industrial, commercial and residential areas. In 2019, the US Census Bureau estimated that 137,566 people live in Charleston.

Contamination History

Historically, industries operating on and around the site included a MGP, a steam generating plant, a wood treating plant, a coal tar and pine pitch refining plant, a paint and chemical manufacturer, and a shipyard. Based on the waste generated at the MGP and the contaminants found at the site, EPA and SCDHEC determined that the MGP was a major source of contamination.

Following its construction in 1855, the MGP produced a combustible gas known as "town gas" by heating coal in the absence of oxygen. Plant operations also included distributing the gas to area homes and businesses as fuel for gas lamps and cooking stoves. The heating process used to separate the flammable gas from coal or oil produced waste byproducts, including liquid coal tar. The MGP originally operated as a coal-carbonization plant. It was later converted to a carbureted water-gas plant in 1910, which continued to produce gas until the plant closed in 1957. Following the plant's closure and demolition in the late 1950s, a substantial amount of coal tar remained buried in the soil as the area was being developed with buildings, streets and local infrastructure. SCE&G built its electrical substation on the site in the late 1970s.

In 1991, EPA and SCDHEC identified contamination from the former MGP remaining in soil, sediment and groundwater at the site. Contaminants of concern included volatile organic compounds (benzene, toluene, ethylbenzene and xylene) and polycyclic aromatic hydrocarbons (PAHs). Localized areas of significant contamination corresponded to locations associated with MGP storage tanks and a railcar loading area, the former steam plant, and an oil-water separator discharge line. In 1992, the site received a Hazard Ranking System score sufficient for National Priorities List listing, however listing was deferred, and the Site was addressed pursuant to a Superfund Alternative Approach. SCE&G¹, whose predecessor companies owned and operated the MGP, took on full responsibility for site investigations and cleanup.



Figure 2. The former steam generating plant building.

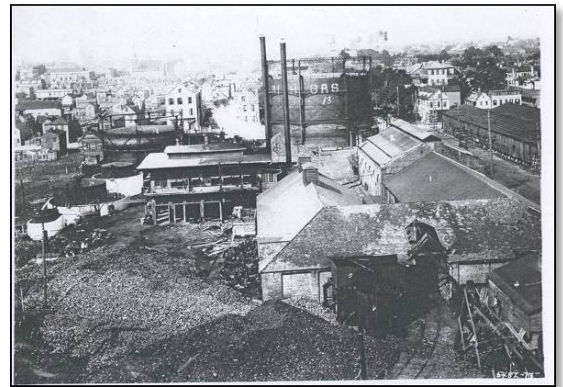


Figure 3. Past industrial activities at the site.

¹ SCE&G is a subsidiary of SCANA. Dominion Energy purchased SCANA in January 2019 and SCE&G's name changed to Dominion Energy South Carolina, Inc. in April 2019. For the purposes of this case study, the potentially responsible party will be referred to as SCE&G throughout the document.

Site Cleanup

EPA divided the site into two separate areas, known as operable units 1 and 2 (OU1 and OU2), to best address the different areas and types of contamination at the site. OU1 addresses contaminated soil, shallow groundwater and dense non-aqueous phase liquid (DNAPL). OU2 addresses contamination in deeper groundwater and sediment in the Cooper River. EPA, SCDHEC and SCE&G worked together to clean up the site in a way that would protect public health and the environment, while making redevelopment possible. EPA coordinated with SCDHEC, the City of Charleston and SCE&G on the future anticipated use of the site and scheduled the cleanup in a phased approach that would allow development and reuse of individual parcels to occur quickly.

Although SCE&G removed more than 62,000 tons of tar-impacted soil from the site from 1998 through 2005, the remaining coal tar posed a challenge to the cleanup process. Much of the remaining contamination was below the SCE&G substation. Due to high voltage electrical equipment, streets and structures, it was not easily accessible. Workers could not safely use conventional excavation techniques to remove the source material.

Because the substation supplies electricity to the Charleston Peninsula and outlying areas, it was critical that this substation remain in service. The logistics of finding an alternate location for building a new substation in downtown Charleston and switching over from the existing substation would have been impractical. Following the removal of contamination from accessible areas, EPA, SCDHEC and SCE&G developed a way for the utility to continue cleanup activities in inaccessible areas without disrupting the substation's operations.

SCE&G used several innovative techniques for the cleanup. To remove DNAPL from areas beneath existing buildings and structures, SCE&G installed source recovery wells and a recovery trench. SCE&G also worked with the U.S. Geological Survey to use phytoremediation, a process that involves using vegetation to remove contamination from the subsurface. SCE&G authorized the planting of hybrid poplar trees on their substation property to take up contaminated groundwater through their root systems. The utility estimates that these trees take up as much as 105,000 gallons of contaminated groundwater each eight-month growing season. Benzene, toluene, naphthalene and other coal tar-related PAHs have been detected in tree tissue samples. In 2006, in recognition of these innovative approaches to groundwater cleanup, SCE&G received the Southern Gas Association's Environmental Excellence Award in Technology.

In addition, SCE&G addressed contaminated sediment in the Cooper River. The remedy included installation of caps over contaminated sediment and shoreline restoration efforts, which helped reestablish ecological habitat.



Figure 4. Removal of subsurface contaminants from 360 Concord Street.



Figure 5. An extraction well at the SCE&G substation.

SCE&G followed South Carolina Oyster Restoration and Enhancement Program guidelines to create a shellfish habitat area and protect the shoreline from erosion. SCE&G completed the caps in 2006.

SCE&G also conducted cleanup activities without affecting nearby businesses and tourist areas. For example, the utility retrofitted groundwater monitoring wells to blend in with bluestone walkways and the visual character of the area.

Current remediation and maintenance activities at the site include groundwater monitoring, DNAPL pumping from the subsurface and pumping system maintenance. The DNAPL is sent off site for recycling and blended into fuel to power cement kilns. Between October 1998 and November 2019, pumping operations removed over 41,000 gallons of DNAPL. SCE&G submits regular groundwater monitoring reports to EPA and SCDHEC.

Institutional controls for the SCE&G property were implemented in September 2018. They prohibit consumptive groundwater use, use of the property that interferes with remediation, non-remedial well drilling, soil excavation without EPA approval, and residential, agricultural, day care or elderly care facilities or recreational uses. Part of the Charleston City Code acts as an institutional control for groundwater outside of the SCE&G property and requires that dwelling structures must have fresh water from a SCDHEC-approved well or from a public water system.



Figure 6. Extracted DNAPL.

Throughout the site’s cleanup, EPA and SCDHEC staff met regularly with SCE&G and local officials to share information and bring reuse ideas into the cleanup process. EPA also held public information sessions to update the community on site activities. EPA-led meetings served as forums for community questions, concerns and priorities for the site’s cleanup and reuse. There were also several collaborative meetings between SCE&G, the city and the private developers involved at the site. EPA and SCDHEC attended those meetings to facilitate discussions, answer questions and ensure the protectiveness of the remedy during redevelopment activities. This open communication and transparent information sharing built community trust and strengthened working relationships. As the site’s cleanup progressed, community support for reuse grew.

“It’s been great working with a private corporation (SCE&G) that’s so sharp and proactive in addressing the cleanup and redevelopment of the site.”

– Ken Mallery, former EPA Site Manager

Beneficial Effects

Today, the Calhoun Park Area site provides a multitude of uses and benefits. Businesses that operate on site bolster the local economy and help generate local and state tax revenues. Current land uses at the site include commercial and residential buildings, continued utility services, public and educational services, recreational and cultural attractions and ecological projects. This section describes some of the beneficial effects of the continued use and reuse at the site. Figure 7 shows the locations of site uses highlighted in this section.



Figure 7. A map of the Calhoun Park Area site and the locations of some site reuses.

Commercial and Residential Uses

South Carolina Aquarium

Early in the cleanup process, the South Carolina Aquarium expressed interest in building its new, state-of-the-art aquarium on part of the site property. With this in mind, EPA scheduled a phased approach that prioritized the cleanup of the parcels for the planned aquarium and made them available for reuse sooner. The City of Charleston provided \$10.5 million in funding and managed construction of the facility, while Charleston County and the State of South Carolina provided an additional \$19 million. The South Carolina Aquarium opened in May 2000 and is home to over 5,000 animals native to South Carolina. In 2019, the aquarium received the National Medal for Museum and Library Service for its efforts in educating the public and sustainability.

The South Carolina Aquarium has had a positive impact on the local economy by generating \$12 million in annual sales and providing about \$2.4 million in estimated annual employee income. The aquarium is a major tourist attraction and provides the local community with educational opportunities and public services, as well as attracting visitors that also frequent area restaurants, hotels and other tourism services. A conservative estimate by the city in 2002, shortly after the South Carolina Aquarium opened, indicated that the City of Charleston's

project investment of \$10.5 million ultimately resulted in over \$112 million in public and private investment on adjacent parcels.

Celebrating its 20-year anniversary at its new location in 2020, the South Carolina Aquarium remains a catalyst for drawing development, businesses and visitors to the Charleston Harbor. The South Carolina Aquarium also plays an integral role in environmental education as well as teaching and modeling sustainability. The aquarium's education department presents daily interpretive programs for visitors and offers free programming to students grades K through 12 via the donation-funded Structured School Program. Students who visit the aquarium as part of this program participate in classroom activities that reinforce South Carolina state science standards. Topics include watersheds, Earth history and taxonomy. The aquarium also hosts teacher workshops designed to provide professional development. Staff at the museum participate in research and conservation efforts with local, state and federal agencies, non-governmental organizations, and other research facilities.

Since 2001, the aquarium has recycled more than 150 tons of waste, including cardboard, wine corks, ink cartridges and more. The aquarium also provides bikes for employees to run errands to help conserve fuel. Plants on the aquarium's property are native species, requiring less water and providing pollinator habitat. The aquarium also hosts special events, including the Climate-Friendly Challenge that gives participants weekly challenges via email to reduce their carbon footprint, and the Turtle Trek 5K, a 5K sunset beach run/walk whose proceeds support the Sea Turtle Care Center and the Aquarium's conservation initiatives.



Figures 8-11. The front entrance to the South Carolina Aquarium, a display at the entrance, an informational display on native plants that provide pollinator habitat, and an outdoors insect habitat exhibit.

25 Calhoun Office Building

The four-story 25 Calhoun office building is one of Charleston’s premier office buildings and includes 63,000 square feet of leasable space. Located at the corner of Calhoun and Washington Streets, the building was completed in Fall 2011 and is LEED-certified, combining modern architecture with leading edge green design. It is home to offices of law firms, computer programming companies, insurance companies and more. In 2020, the businesses operating at the 25 Calhoun office building employ 76 people and provide about \$7.8 million in estimated annual employee income. Together, those businesses generate about \$13 million in combined annual sales revenue.



Figures 12-13. The 25 Calhoun office building and the front entrance to the 25 Calhoun office building.

360 Concord Office Building

The 360 Concord office building is located east of the SCE&G substation at the corner of Concord and Charlotte Streets. Businesses operating in the building include Applied Technology and Management, Grayline Tours, Raymond James & Associates, among others. In 2020, 65 employees work out of this building, with businesses generating nearly \$12 million in combined annual sales and over \$6.3 million in estimated annual employee income.



Figures 14-15. The 360 Concord office building.

The Gadsden and Williams Terrace Senior Housing

The Gadsden and Williams Terrace Senior Housing are residences located along the southern edge of the site, along Laurens Street. Both are recently constructed and within walking distance of downtown Charleston. The Gadsden is a 76-unit luxury condominium completed in 2018. The condos include one, two- and three-bedroom units, and are currently 75% sold out. Williams Terrace Senior Housing is a 41-unit apartment complex dedicated to seniors 65 and over that opened in 2017.



Figures 16-17. Gadsdenboro Park and The Gadsden and Williams Terrace Senior Housing.

Public Service and Educational Uses

SCE&G Substation

The 230-kilovolt Charlotte Street Electrical Substation is the primary substation that distributes electricity to the Charleston Peninsula and outlying areas, serving about 22,000 customers. Built in 1970, the electrical substation is maintained by staff whose responsibilities include conducting and overseeing ongoing cleanup and groundwater monitoring activities.



Figures 18-19. The SCE&G Substation.

City Parking Garage

As part of the South Carolina Aquarium construction, the City of Charleston looked at land uses near the site for a parking structure. Early plans included a large surface parking lot to serve the facility and cap contamination in place. Instead, the City of Charleston built a smaller-scale parking garage next to the SCE&G substation that would meet the parking demands of the aquarium and surrounding development.

College of Charleston – Harbor Walk East

The College of Charleston has a location at the site that is less than a mile away from its main campus in downtown Charleston. The College of Charleston – Harbor Walk East is home to the school’s Department of Computer Science and consists of two buildings with classrooms, lounges, faculty offices and a motion capture lab.

Recreational and Cultural Uses

Fort Sumter Visitor Education Center and Ferry Terminal

Historic Fort Sumter National Monument is located in the middle of Charleston Harbor and is accessible only by boat. The National Park Service’s Fort Sumter Visitor Center is located at Liberty Square and is the primary ferry departure facility for visiting the fort. The Center offers interpretive and visual exhibits on the events leading up to the start of the Civil War with the bombardment of Fort Sumter. Fort Sumter Tours and Spirit Line Cruises are the authorized ferry service providers for the fort. The company also offers cruises, harbor tours, private charters and weddings. The Fort Sumter Visitor Education Center and the ferry service businesses together generate nearly \$700,000 in combined annual sales and provide about \$115,000 in estimated annual employee income.



Figure 20. The entrance to the city parking garage.

consists of two buildings with classrooms, lounges,



Figure 21. The Fort Sumter Visitor Education Center.

Liberty Square

Liberty Square is a National Park Service facility maintained by the City of Charleston as a public open space. The square functions as a community space along the waterfront and hosts events such as the city's annual First Day Festival back to school event, aquarium events, gatherings for historic Civil War events and the Governor's Conference reception.



Figures 22-23. Liberty Square and an outdoor seating area in Liberty Square.

The site of Liberty Square has historical significance as well. It was a place of arrival for survivors of the Atlantic slave trade. Gadsden's Wharf, an 800-foot waterfront area immediately east of the Calhoun Park Area site, was built in 1767 and was the primary wharf for slave ships arriving in Charleston for 25 years. An estimated 100,000 West Africans were brought to the wharf between 1783 and 1808. No other place in the country received more than Gadsden's Wharf. Today, the park has commemorative plaques honoring African American history and detailing the history of Gadsden's Wharf.



Figures 24-26. Informational signs about the African American history of Gadsden's Wharf.

Gadsdenboro Park

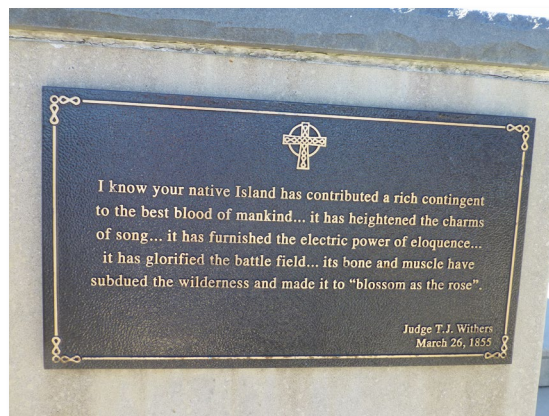
Gadsdenboro Park is a 5-acre park that opened in 2015 at the former Ansonborough Homes property, where SCDHEC addressed contamination under the authority of the state's Voluntary Cleanup program. Located adjacent to The Gadsden, the park includes soccer fields, nautical-themed playgrounds, game tables, a bocce court, a fountain and public restrooms. The park also includes decorative fountains and landscaping.



Figures 27-29. A playground at, a sign for and a seating area at Gadsdenboro Park.

Charlotte Street Park

Charlotte Street Park is located in the northeast corner of the site and opened to the public in 2013. The park has benches and a sweeping view of the Cooper River and Arthur Ravenel Jr. Bridge. The park is also home to the South Carolina Irish Memorial, honoring the contributions of the Irish to the state of South Carolina. It features a concrete pier extending over the water, and a raised 30-by-24-foot carved granite map of Ireland. It also includes flagpoles with the Charleston, American and Irish flags along with plaques containing quotes about Irish immigration to this country.



Figures 30-33. The entrance to Charlotte Street Park, flag poles at Charlotte Street Park, the granite map of Ireland and a commemorative plaque.

Environmental Uses

The Calhoun Park Area site is home to innovative environmental uses related to site remediation, as well as environmentally friendly businesses. Part of SCE&G's remedy involved reestablishing ecological habitat along the Cooper River, which included the creation of the Oyster Research Study Area. The Oyster Research Study Area created shellfish habitat areas using bagged oyster shells that not only protect the shoreline from erosion, but also helps supplement an existing sand cap. Planted poplar trees are also used as part of the remediation by taking up contaminated groundwater through their root systems. The South Carolina Aquarium's property is home to native plants, which require less water than non-native species and provide pollinator habitat in an urban setting. The Holy Spokes bike share company owns a bike rental station at Gadsdenboro Park. The bike share company provides a gasoline-free transportation alternative for visitors and locals. Holy Spokes has bike stations throughout downtown Charleston.



Figures 34-37. Bagged oyster shells, a sign for the Oyster Research Study Area, hybrid poplar trees and a Holy Spokes bike station.

"The true investment of the stakeholders in this project, and the sense of urgency that existed to address the cleanup, played major roles in moving the entire project forward."

– Thomas Effinger, SCE&G Environmental Services Manager

EPA Region 4 Excellence in Site Reuse Award

EPA Region 4 created the “Excellence in Site Reuse” award to recognize those who have gone above and beyond in supporting redevelopment through outstanding efforts when redeveloping a site. On November 8, 2012, EPA Region 4 honored SCE&G and the City of Charleston with the Excellence in Site Reuse Award for their roles in the cleanup and redevelopment of the Calhoun Park Area site. The award ceremony took place at Liberty Square. The photos below show a few of the ceremony highlights.



“It was nice being able to participate in the awards ceremony and see how appreciative everyone was to the stakeholders for the great cleanup work and redevelopment efforts”.

– Ken Mallary, Former EPA Site Manager

Planned Use

Plans for additional site development are underway. Investors recently acquired two adjacent parcels immediately east of the 25 Calhoun building. Possible plans for the property include construction of a long-anticipated hotel.

Property Values and Tax Revenues

On-site properties help generate property tax revenues that support local government and public services. Today, site properties have a combined value of over \$113 million. In 2019, site properties generated over \$1.5 million in total property tax revenues. On-site businesses also generate tax revenues through the collection of sales taxes, which support state and local governments.²



Figure 38. Additional site development underway.

² The sales tax rate for Charleston County is 9 percent. For more information, see <https://dor.sc.gov/tax-index/sales-and-use/Sales%20Notices/ST427.pdf>.

Conclusion

Collaboration and cooperation among EPA, SCE&G, SCDHEC, the City of Charleston, and the developers and community resulted in the successful cleanup and ongoing redevelopment of the Calhoun Park Area site. The phased cleanup approach supported new development and forward-thinking ideas enabled the continued operation of vital public services. Innovative and creative remediation approaches made cleanup possible, while also providing ecosystem benefits. Today, the site's commercial, residential, public service, educational, recreational and cultural reuses provide about 238 jobs and almost \$16.7 million in estimated annual employee income. In 2019, these businesses generated about \$37.2 million in sales.



Figure 39. The Schooner Pride tour boat overlooking the Cooper River.

*For more information about EPA's Superfund Redevelopment Initiative, visit:
<https://www.epa.gov/superfund-redevelopment-initiative>.*



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Technical Appendix

Employment Information for On-Site Jobs

EPA obtained the data included in this appendix directly from reputable sources and reported the data as presented by those sources. Information on the number of employees and sales volume for on-site businesses came from the Hoovers/Dun & Bradstreet (D&B) database.¹ D&B maintains a database of over 300 million businesses worldwide. When Hoovers/D&B database research was unable to identify employment and sales volume for on-site businesses, EPA used the ReferenceUSA database.² In cases where ReferenceUSA did not include employment and sales volume for on-site businesses, EPA used the Manta database.³ These databases include data reported by businesses. Accordingly, some reported values might be underestimates or overestimates. In one instance, business and employment information came from the business website. While sales values typically exceed estimated totals of annual income, sales can sometimes be lower than estimated income. This could be attributed to a number of business conditions and/or data reporting.

Wage and Income Information for On-Site Jobs

EPA obtained wage and income information from the U.S. Bureau of Labor Statistics (BLS). Part of the U.S. Department of Labor, the BLS is the principal federal agency responsible for measuring labor market activity, working conditions and price changes in the economy. All BLS data meet high standards of accuracy, statistical quality and impartiality.

EPA used the BLS Quarterly Census of Employment and Wages database to obtain average weekly wage data for businesses at the Calhoun Park Area site. Average weekly wage data were identified by matching the North American Industry Classification System (NAICS) codes for each type of business with weekly wage data for corresponding businesses in Charleston County. If weekly wage data were not available at the county level, EPA sought wage data by state or national level, respectively. In cases where wage data were not available for the six-digit NAICS code, EPA used higher-level (less-detailed) NAICS codes to obtain the wage data.

To determine the annual wages (mean annual) earned from jobs generated by each of the selected businesses at the Calhoun Park Area Superfund site, EPA multiplied the average weekly wage figure by the number of weeks in a year (52) and by the number of jobs (employees) for each business.

¹ <http://www.dnb.com>

² <http://resource.referenceusa.com>

³ <https://www.manta.com/>

Table A-1. Calhoun Park Area Site: Information for On-Site Organizations and Businesses

| On-Site Business | NAICS Code ^a | NAICS Title | Number of Employees ^b | Average Weekly Wage (2019) ^c | Annual Wage (Mean Annual) per Employee | Total Annual Income ^d | Annual Sales (2019) ^b |
|--|-------------------------|--|----------------------------------|---|--|----------------------------------|----------------------------------|
| Applied Technology and Management, Inc (ATM) | 541620 | Environmental Consulting Services | NA | \$1,465 | \$76,180 | NA | NA |
| Aquarium Garage City of Charleston | 812930 ^e | Parking Lots and Garages | 3 | \$906 | \$47,112 | \$141,336 | \$71,000 ^f |
| Avenue A Stores LLC | 452319 | All Other General Merchandise Stores | 1 ^g | \$535 | \$27,820 | \$27,820 | \$520,000 ^g |
| Bridge Commercial | 531210 ^e | Offices of Real Estate Agents and Brokers | NA | \$1,051 | \$54,652 | NA | NA |
| Butler Snow | 541110 | Offices of Lawyers | 1 ^g | \$1,686 | \$87,672 | \$87,672 | \$788,000 ^g |
| Campsen & Campsen | 541110 | Offices of Lawyers | 3 | \$1,686 | \$87,672 | \$263,016 | \$204,000 ^f |
| Charleston Cruise Company (Schooner Pride Sailboat) | 713990 | All Other Amusement and Recreation Industries | 1 | \$295 | \$15,340 | \$15,340 | \$71,000 |
| Chiropractic and Therapy LLC | 621310 | Offices of Chiropractors | 2 | \$600 | \$31,200 | \$62,400 | \$130,000 |
| College of Charleston (Department of Computer Science) | 541720 | Research and Development in the Social Sciences and Humanities | 8 | \$1,031 | \$53,612 | \$428,896 | \$1,248,000 ^h |
| East West Resorts | 531110 ^e | Lessors of Residential Buildings and Dwellings | 8 ^g | \$898 | \$46,696 | \$373,568 | \$892,000 ^g |
| Fort Sumter National Monument Tours | 712190 | Nature Parks and Other Similar Institutions | 1 | \$1,194 | \$62,088 | \$62,088 | \$20,000 ^f |

| On-Site Business | NAICS Code ^a | NAICS Title | Number of Employees ^b | Average Weekly Wage (2019) ^c | Annual Wage (Mean Annual) per Employee | Total Annual Income ^d | Annual Sales (2019) ^b |
|---|-------------------------|---|----------------------------------|---|--|----------------------------------|----------------------------------|
| Ft. Sumter Tours & Spiritline (Spirit Line Cruises) | 561520 | Tour Operators | 2 | \$514 | \$26,728 | \$53,456 | \$671,000 |
| Gadsden Street Parking | 812930 | Parking Lots and Garages | 3 | \$313 | \$16,276 | \$48,828 | \$55,000 |
| Grayline Tours Inc | 561520 | Tour Operators | 16 ^g | \$514 | \$26,728 | \$427,648 | \$1,432,000 ^g |
| Jonestrading Institutional Services LLC | 424990 | Other Miscellaneous Nondurable Goods Merchant Wholesalers | 4 | \$1,333 | \$69,316 | \$277,264 | \$957,000 ^g |
| Prospect Holdings LLC | 531210 | Offices of Real Estate Agents and Brokers | 2 | \$1,051 | \$54,652 | \$109,304 | \$68,000 ^f |
| Rapid Ocean Response Corp. | 624230 ^e | Emergency and Other Relief Services | 5 | \$930 | \$48,360 | \$241,800 | \$101,000 ^f |
| Raymond James & Associates, Inc. | 523110 | Investment Banking and Securities Dealing | 19 | \$3,886 | \$202,072 | \$3,839,368 | \$6,377,000 ^g |
| Rer Investments Ltd Co | 523910 | Miscellaneous Intermediation | 2 | \$3,896 | \$202,592 | \$405,184 | \$200,000 ^f |
| Robert W Baird & Co Incorporated | 523120 | Securities Brokerage | 11 | \$4,821 | \$250,692 | \$2,757,612 | \$8,376,000 ^g |
| Sharp Shooter/Spectrum Venture, L.L.C. (Magic Memories) | 541922 ^e | Commercial Photography | 1 ⁱ | \$645 | \$33,540 | \$33,540 | \$51,870 ⁱ |
| South Carolina Aquarium | 712130 | Zoos and Botanical Gardens | 92 | \$509 | \$26,468 | \$2,435,056 | \$12,000,000 |
| South Carolina Electric & Gas Substation | 221122 ^e | Electric Power Distribution | NA | \$1,584 | \$82,368 | NA | NA |
| Sumter Specialty Insurance Company | 524210 | Insurance Agencies and Brokerages | 2 | \$1,487 | \$77,324 | \$154,648 | \$140,000 ^f |
| Thesys Technologies, LLC | 541511 | Custom Computer Programming Services | 5 ^g | \$1,772 | \$92,144 | \$460,720 | \$1,813,000 ^g |

| On-Site Business | NAICS Code ^a | NAICS Title | Number of Employees ^b | Average Weekly Wage (2019) ^c | Annual Wage (Mean Annual) per Employee | Total Annual Income ^d | Annual Sales (2019) ^b |
|--------------------------|-------------------------|--|----------------------------------|---|--|----------------------------------|----------------------------------|
| Tracie Long Fitness | 713940 | Fitness and Recreational Sports Center | 2 | \$325 | \$16,900 | \$33,800 | \$45,000 |
| Young Clement Rivers LLP | 541110 | Offices of Lawyers | 44 ⁱ | \$1,686 | \$87,672 | \$3,857,568 | \$985,000 ^{f,g} |
| Total | | | 238 | | | \$16,597,932 | \$37,215,870 |

^a NAICS code provided in the D&B database, unless otherwise noted.

^b Data are from the D&B database, unless otherwise noted.

^c Average weekly wage per employee based on BLS 2019 Average Weekly Wage data.

^d Total annual income figures derived by multiplying “Number of Employees” by “Annual Wage (Mean Annual) per Employee.”

^e NAICS code assumed based on available business information.

^f While sales values typically exceed estimated totals of annual employee income, annual reported sales can sometimes be lower than estimated annual income. This atypical condition of estimated income exceeding sales can be a result of business conditions, estimated business wages not accurately reflecting actual wages for the site-specific business, annual sales being under-reported, a business loss for the year or a combination of those factors.

^g Data are from the ReferenceUSA database.

^h Annual sales value calculated using the “Sales Per Employee” method. In cases where information sources do not provide annual sales data, an estimated annual sales value was calculated using the “Sales Per Employee Method”. This method involves dividing the company-wide sales value by the number of employees that work at all branches of the business. That value equals an estimated business sales value per employee for the entire company. That value is then multiplied by the number of employees at the on-site business location to calculate an estimated annual sales value for the site-specific business location.

ⁱ Data are from the Manta database.

^j Employee number from company website <https://www.ycrlaw.com/attorney-profiles/>.

NA = Not available.

Property Values and Local Tax Revenue Generated from Property Taxes

EPA obtained data on the most recently assessed values for property parcels at the Calhoun Park Area site in May 2020 through property records accessible through Charleston County’s online property appraisal database.⁴ EPA also obtained 2019 property tax information for the site parcels.⁴

Table A-2. Property Value and Tax Summary for Taxes Payable in 2019

| Parcel ID No. | Total Market Value of Land and Improvements (2019) | Total Property Tax (2019) |
|---------------|--|---------------------------|
| 4580102027 | \$0 ^a | \$0 ^b |
| 4580102028 | \$24,000,000 | \$337,327 |
| 4580102062 | \$0 ^a | \$86 |
| 4580102064 | \$7,500,000 | \$91,665 |
| 4580102065 | \$0 ^a | \$0 ^b |
| 4580102066 | \$0 ^a | \$2,236 |
| 4580102067 | \$5,750,000 | \$93,702 |
| 4580102070 | \$790,000 | \$12,973 |
| 4580102071 | \$835,000 | \$13,706 |
| 4580102072 | \$579,000 | \$9,534 |
| 4580102073 | \$1,190,000 | \$19,491 |
| 4580102074 | \$698,000 | \$1,147 |
| 4580102075 | \$804,000 | \$4,285 |
| 4580102076 | \$795,000 | \$4,238 |
| 4580102077 | \$770,000 | \$12,647 |
| 4580102078 | \$434,000 | \$7,171 |
| 4580102079 | \$455,000 | \$2,468 |
| 4580102080 | \$999,000 | \$16,379 |
| 4580102081 | \$999,000 | \$16,379 |
| 4580102082 | \$449,000 | \$7,416 |
| 4580102083 | \$779,000 | \$12,794 |
| 4580102084 | \$1,050,000 | \$17,210 |
| 4580102085 | \$980,000 | \$16,069 |

⁴ The Charleston County Assessor’s Office Tax Records: <https://sc-charleston.publicaccessnow.com/Welcome.aspx>.

| Parcel ID No. | Total Market Value of Land and Improvements (2019) | Total Property Tax (2019) |
|----------------------|---|----------------------------------|
| 4580102086 | \$865,000 | \$14,195 |
| 4580102087 | \$980,000 | \$16,069 |
| 4580102088 | \$999,000 | \$5,300 |
| 4580102089 | \$773,000 | \$4,123 |
| 4580102090 | \$799,000 | \$4,259 |
| 4580102091 | \$564,000 | \$9,290 |
| 4580102092 | \$1,180,000 | \$19,328 |
| 4580102093 | \$683,000 | \$3,655 |
| 4580102094 | \$779,000 | \$4,154 |
| 4580102095 | \$769,000 | \$4,102 |
| 4580102096 | \$750,000 | \$4,004 |
| 4580102097 | \$455,000 | \$7,514 |
| 4580102098 | \$459,000 | \$2,228 |
| 4580102099 | \$980,000 | \$16,069 |
| 4580102100 | \$1,055,000 | \$17,291 |
| 4580102101 | \$433,000 | \$7,155 |
| 4580102102 | \$746,000 | \$12,256 |
| 4580102103 | \$1,030,000 | \$16,884 |
| 4580102104 | \$980,000 | \$16,069 |
| 4580102105 | \$839,000 | \$4,207 |
| 4580102106 | \$970,000 | \$15,906 |
| 4580102107 | \$1,084,000 | \$5,742 |
| 4580102108 | \$790,000 | \$12,973 |
| 4580102109 | \$900,000 | \$14,765 |
| 4580102110 | \$594,000 | \$9,779 |
| 4580102111 | \$1,180,000 | \$19,328 |
| 4580102112 | \$699,000 | \$3,738 |
| 4580102113 | \$875,000 | \$4,654 |
| 4580102114 | \$845,000 | \$13,869 |
| 4580102115 | \$750,000 | \$12,321 |
| 4580102116 | \$449,000 | \$2,437 |

| Parcel ID No. | Total Market Value of Land and Improvements (2019) | Total Property Tax (2019) |
|---------------|--|---------------------------|
| 4580102117 | \$447,000 | \$7,383 |
| 4580102118 | \$1,015,000 | \$16,639 |
| 4580102119 | \$999,000 | \$16,379 |
| 4580102120 | \$451,000 | \$2,447 |
| 4580102121 | \$779,000 | \$12,794 |
| 4580102122 | \$999,000 | \$16,379 |
| 4580102123 | \$980,000 | \$16,069 |
| 4580102124 | \$869,000 | \$4,623 |
| 4580102125 | \$1,020,000 | \$16,721 |
| 4580102126 | \$1,070,000 | \$17,536 |
| 4580102127 | \$839,000 | \$4,467 |
| 4580102128 | \$995,000 | \$16,314 |
| 4580102129 | \$630,000 | \$10,365 |
| 4580102130 | \$1,266,000 | \$20,730 |
| 4580102131 | \$736,000 | \$3,670 |
| 4580102132 | \$925,000 | \$15,173 |
| 4580102133 | \$890,000 | \$14,602 |
| 4580102134 | \$1,050,000 | \$12,321 |
| 4580102135 | \$454,000 | \$7,497 |
| 4580102136 | \$477,000 | \$7,872 |
| 4580102137 | \$1,053,000 | \$5,581 |
| 4580102138 | \$1,034,000 | \$16,949 |
| 4580102139 | \$508,000 | \$8,377 |
| 4580102140 | \$817,000 | \$13,413 |
| 4580102141 | \$1,079,000 | \$5,716 |
| 4580102142 | \$990,000 | \$16,232 |
| 4580102143 | \$990,000 | \$16,232 |
| 4580102144 | \$1,050,000 | \$17,210 |
| 4580102145 | \$999,000 | \$16,379 |
| 4590000006 | \$12,800,000 | \$205,917 |
| 4590000157 | \$0 ^a | \$0 ^b |

| Parcel ID No. | Total Market Value of Land and Improvements (2019) | Total Property Tax (2019) |
|---------------|--|---------------------------|
| 4590000166 | \$0 ^a | \$0 ^b |
| 4590000167 | \$0 ^a | \$16,512 |
| 4591304001 | \$0 ^a | \$258 |
| 4591304002 | \$0 ^a | \$0 ^b |
| 4580102063 | NA | \$0 ^b |
| Totals | \$113,321,000 | \$1,581,344 |

^a Parcels with \$0 as market value are owned by the US Government or the City of Charleston.

^b Parcels without property tax values are exempt from property tax.

NA = Not available.