

2022 Disparity Study

WASHINGTON SUBURBAN
SANITARY COMMISSION



**Washington Suburban
Sanitary Commission**
2022 Disparity Study

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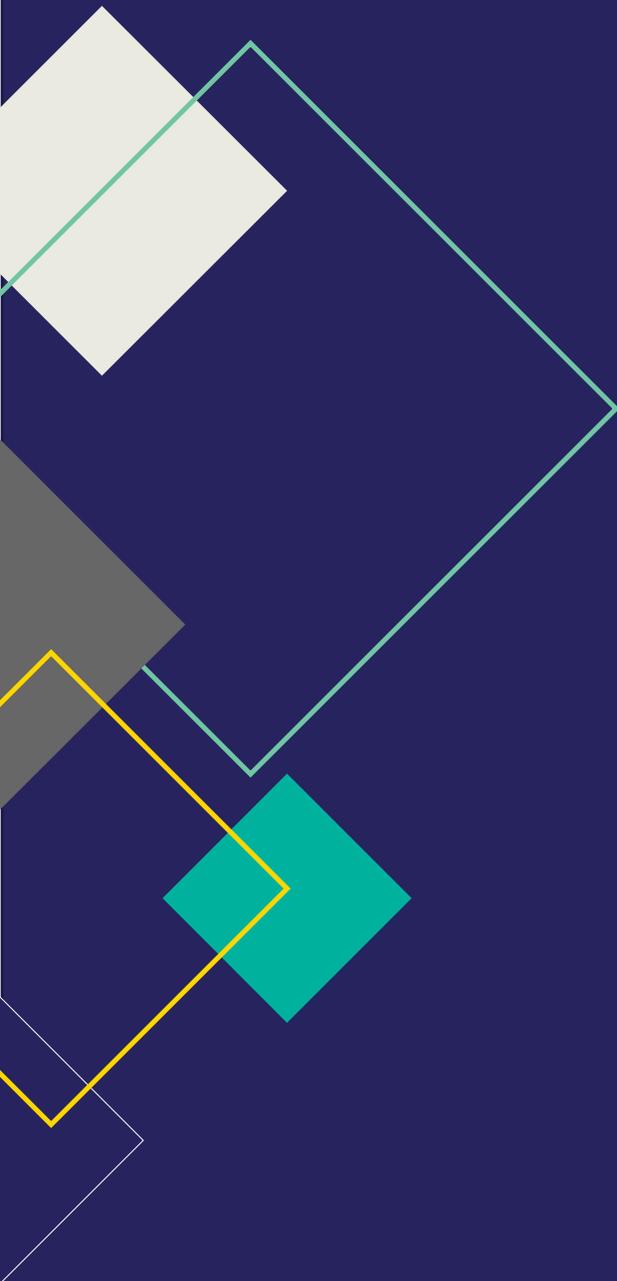
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Executive Summary

Introduction

The Washington Suburban Sanitary Commission (WSSC Water) retained MGT of America Consulting, LLC (MGT) to conduct WSSC Water's 2022 availability and disparity study. WSSC Water's study analyzed procurement activity from July 1, 2014, through June 30, 2019 (FY2015 – FY2019) for Construction, Architecture & Engineering, Professional Services, and Goods & Services. To ensure adherence to constitutional law, the objectives of the study were to determine whether WSSC Water, either in the past or currently, engages in discriminatory practices, or passively operates in a discriminatory marketplace, in soliciting and awarding contracts to M/WBEs. Additionally, we determine if a legally justified need exists for the continuation of the MBE program in accordance with the guidelines set forth by the Supreme Court and relevant subsequent cases.

The study finds statistical evidence of the presence of business discrimination against M/WBEs in both the private and public sector within the WSSC Water's marketplace. Additionally, to add to the statistical evidence, MGT conducted qualitative and anecdotal activities to understand the discriminatory experiences of vendors in the marketplace. The results of these activities were also consistent with the presence of discrimination against M/WBEs in the marketplace.

STUDY SCOPE AND DATA PARAMETERS

The scope of the disparity study included defining WSSC Water's market area and analyzing payment data for prime and subcontractors. MGT staff compiled and reconciled electronic data provided by WSSC Water to develop a master set of prime and subcontractor contract data into a Master Utilization Database to support the needs of the Study. MGT utilized WSSC Water's financial data as the source of prime data and a portion of the subcontractor data, and that was combined with the subcontractor data collected via a survey of the primes. MGT merged the subcontractor data with the prime data to create the Master Utilization Database. To link the subcontractor data to its appropriate prime contract, a standard contract ID across both data sets was used.

Once MGT completed the data collection process and entered all contract data in a master database, MGT cleaned and prepared the collected data. The data preparation included ensuring consistent firm variables such as name and address, assigning missing race and gender information, assigning missing primary NAICS codes, filling in missing address information, ensuring all paid dollar amounts were accurate (project and prime and subcontracting levels), and identifying significantly incomplete projects. Once this database of collected data was finalized, it was added to the database of contracts that were not included in the sampling universe and proceeded to analysis.

MARKET AREA

In determining a relevant market area, MGT abides by a 75 percent majority rule of agency spending with deference to historic programmatic considerations to prescribe an appropriate geographic boundary. To establish the appropriate geographic boundaries for the study, the "relevant" market area was isolated according to the 75 percent standard. These market areas are defined by geographic units such as counties

and states, based on the following considerations: 1) the courts have accepted the use of standard geographic units in conducting equal employment opportunity and disparity studies; 2) geographic units are externally determined, so there are no subjective determinations, and 3) U.S. Census and other federal agencies routinely collect data by geographic unit.

Based on the market area analysis results conducted for each business category, the recommended relevant market area are the 29 counties and independent cities within the WSSC Water Market Area. **Chapter 3** details the exact localities utilized.

Key Findings

Finding A: M/WBE Utilization (Chapter 3, Appendix C)

In **Table ES-1**, the utilization analysis shows that non-M/WBE firms are utilized at higher rates than their M/WBE counterparts. The WSSC Water’s utilization of non-M/WBE firms totaled 66.80 percent, while 33.20 percent went to M/WBE firms. Overall, the highest utilization rates among M/WBE classifications included African American firms accounting for 8.89 percent of dollars spent and Nonminority Female firms accounting for 8.82 percent of dollars spent. African American firms had the greatest utilization in Goods & Services at 19.97 percent or \$92.24 million, followed by Asian American firms in Architecture & Engineering at 14.77 percent or \$36.59 million.¹

TABLE ES-1.
UTILIZATION ANALYSIS
BY BUSINESS OWNERSHIP CLASSIFICATION AND BY PROCUREMENT CATEGORIES

BUSINESS OWNERSHIP CLASSIFICATION	ALL	Construction	Architecture & Engineering	Professional Services	Goods & Services
African Americans	\$186,114,375.02	\$59,608,032.37	\$19,762,135.64	\$14,500,476.19	\$92,243,730.82
Asian Americans	\$152,173,372.36	\$82,671,083.79	\$36,592,200.17	\$13,997,684.86	\$18,912,403.54
Hispanic Americans	\$171,318,721.88	\$141,938,432.17	\$10,468,364.83	\$1,226,732.75	\$17,685,192.13
Native Americans	\$1,035,291.62	\$1,035,291.62	\$0.00	\$0.00	\$0.00
TOTAL MINORITY FIRMS	\$510,641,760.88	\$285,252,839.95	\$66,822,700.64	\$29,724,893.80	\$128,841,326.49
Nonminority Female Firms	\$184,855,431.93	\$132,523,411.82	\$7,429,400.40	\$7,987,604.94	\$36,915,014.77
TOTAL M/WBE FIRMS	\$695,497,192.81	\$417,776,251.77	\$74,252,101.04	\$37,712,498.74	\$165,756,341.26
TOTAL Non-M/WBE Firms	\$1,399,202,921.88	\$753,093,852.85	\$173,543,420.35	\$176,307,926.83	\$296,257,721.85
TOTAL FIRMS	\$2,094,700,114.69	\$1,170,870,104.62	\$247,795,521.39	\$214,020,425.57	\$462,014,063.11
BUSINESS OWNERSHIP CLASSIFICATION	ALL	Construction	Architecture & Engineering	Professional Services	Goods & Services
African Americans	8.89%	5.09%	7.98%	6.78%	19.97%
Asian Americans	7.26%	7.06%	14.77%	6.54%	4.09%
Hispanic Americans	8.18%	12.12%	4.22%	0.57%	3.83%
Native Americans	0.05%	0.09%	0.00%	0.00%	0.00%
TOTAL MINORITY FIRMS	24.38%	24.36%	26.97%	13.89%	27.89%
Nonminority Female Firms	8.82%	11.32%	3.00%	3.73%	7.99%
TOTAL M/WBE FIRMS	33.20%	35.68%	29.97%	17.62%	35.88%
TOTAL Non-M/WBE Firms	66.80%	64.32%	70.03%	82.38%	64.12%

Source: Chapter 3, Market Area and Utilization Analysis.

¹ Chapter 3, Market Area and Utilization Analyses

Finding B: Availability Estimates (Chapter 4, Appendix C)

A reliable estimation of the number of firms *willing* and *able* to provide each of the respective services is an essential element in the determination of disparity. Post-*Croscon* case law has not prescribed a single approach to deriving firm availability, and agencies have used various means to estimate pools of available vendors that have withstood legal scrutiny.

MGT calculates availability based on a “custom census” approach. This approach is the most accurate for calculating availability at its most granular level. An in-depth explanation of this approach is provided in **Chapter 4**. Detailed availability results by business category and 4-digit NAICS code are provided in **Appendix C**. The availability estimates by procurement category are illustrated in **Table ES-2**.

TABLE ES-2.
ESTIMATION OF AVAILABLE FIRMS

BUSINESS OWNERSHIP CLASSIFICATION	ALL	Construction	Architecture & Engineering	Professional Services	Goods & Services
African Americans	12.39%	9.77%	14.42%	17.21%	15.71%
Asian Americans	8.73%	7.22%	18.31%	11.62%	6.09%
Hispanic Americans	9.88%	13.19%	7.38%	4.44%	5.35%
Native Americans	0.48%	0.29%	0.68%	0.43%	0.85%
TOTAL MINORITY FIRMS	31.48%	30.47%	40.78%	33.71%	28.00%
Nonminority Female Firms	15.58%	14.56%	14.78%	13.05%	19.75%
TOTAL M/WBE FIRMS	47.05%	45.03%	55.56%	46.75%	47.75%
TOTAL Non-M/WBE Firms	52.95%	54.97%	44.44%	53.25%	52.25%

Source: Chapter 4, Availability and Disparity Analysis.

Finding C: Disparity (Chapter 4, Appendix C)

This section includes the results of the disparity ratios calculated in **Chapter 4**. MGT’s disparity index methodology yields an easily calculable value, understandable in its interpretation, and universally comparable. A disparity in utilization within the minority- and female-owned firms can be assessed - comparing the utilization of nonminority- and male-owned firms providing evidence of public sector discrimination.

These overall results show that among M/WBE firms there is disparity in all categories. Only in Goods & Services do you find no disparity for African American firms. Additionally, as a total M/WBE classification, all procurement categories find substantial and statistically significant disparity. Detailed disparity results by business category and 4-digit NAICS code are provided in **Appendix C**.

TABLE ES-3.
DISPARITY RATIO SUMMARY ANALYSIS

Procurement Category	All	Construction	Architecture & Engineering	Professional Services	Goods & Services
African Americans	Disparity	Disparity	Disparity	Disparity	No Disparity
Asian Americans	Disparity	Disparity	Disparity	Disparity	Disparity
Hispanic Americans	Disparity	Disparity	Disparity	Disparity	Disparity
Native Americans	Disparity	Disparity	Disparity	Disparity	Disparity
Total MBE Firms	Disparity	Disparity	Disparity	Disparity	Disparity
Nonminority Females	Disparity	Disparity	Disparity	Disparity	Disparity
Total M/WBE Firms	Disparity	Disparity	Disparity	Disparity	Disparity

BOLD indicates substantial statistically significant disparity.

Finding D: Private Sector *(Chapter 5)*

The private sector analyses looked at whether there was evidence of discrimination in the private sector marketplace that supports WSSC Water’s continuance of its MBE program to avoid becoming a passive participant in discrimination. Analysis of the U.S. Census 2012 SBO data, 2017 ABS data, and the PUMS 2015-2019 data demonstrate, that marketplace discrimination exists for M/WBE firms operating in the private sector within WSSC Water’s marketplace.

Findings from the U.S Census 2012 SBO and 2017 ABS data indicate substantial disparities exist for most M/WBE firms across industry sectors resembling the procurement categories identified for this study.

Analysis of the 2015-2019 PUMS data shows that M/WBE wages were significantly less than those of nonminority males, holding all other variables constant, and M/WBE firms were significantly less likely than nonminority males to be self-employed. If they were self-employed, most M/WBE firms earned significantly less in 2015-2019 than self-employed nonminority males, holding all other variables constant. Analysis of observed vs. predicted self-employment rates show that marketplace discrimination impacted these rates. Further, this analysis indicates that holding all factors consistent, race, ethnicity, and gender play a role in the lower level of self-employment for M/WBEs.

A review of access to credit indicates that minorities and females tend to receive less than the requested amount of credit when they are approved than nonminority men; they are approved for credit less frequently than nonminority males, and that credit costs them more than nonminority males.

Finding E: Qualitative/Anecdotal (Chapter 6)

This qualitative and anecdotal data examined the qualitative evidence from M/WBE firms about the discriminatory obstacles they face in the study market area and their experiences working with WSSC Water, WSSC Water's prime contractors, and within the private sector. The evidence found that M/WBE firms face business-related discrimination in the relevant marketplace at substantially higher rates than non-M/WBEs. Additionally, the results show that M/WBE firms that were solicited for projects with M/WBE goals are seldom or never solicited for projects without goals. The relative lack of solicitation of M/WBEs in the absence of affirmative efforts by WSSC Water and other public entities in the relevant market area shows that business discrimination continues to be a barrier to M/WBE business opportunities.

The qualitative evidence indicates that M/WBEs face discriminatory barriers to full and equitable participation in public and private sector contracts in the WSSC Water market. The results also show that M/WBE firms face business-related discrimination in the relevant marketplace at substantially higher rates than non-M/WBEs. Additionally, the results show that M/WBE firms that were solicited for projects with M/WBE goals are seldom or never solicited for projects without goals. The relative lack of solicitation of M/WBEs in the absence of affirmative efforts by WSSC Water and other public entities in the relevant market area shows that business discrimination continues to be a barrier to M/WBE business opportunities.

Selected Practices

Finally, in **Chapter 7** MGT presented industry best practices for supplier diversity programs. This included:

- ❖ **Best Practice A: Small Business Prime Contracting Programs**
 - **Rotation of Bidders**
 - **Small Business Set-asides/Sheltered Markets**
 - **Race-neutral Joint Ventures**
 - **Construction Management, Request for Proposals, and Design-build**
 - **SBE Prime Contractors Assistance**
- ❖ **Best Practice B: Small Business Program for Subcontracts**
 - **Small Business Project Goals**
- ❖ **Best Practice C: Inclusion in Financial and Professional Services**
- ❖ **Best Practice D: Combined Race-neutral and Race-conscious Programs**
- ❖ **Best Practice E: Outreach**

1. Introduction

1.1 Introduction

The Washington Suburban Sanitary Commission (WSSC Water) retained MGT of America Consulting, LLC (MGT) to conduct WSSC Water’s 2022 availability and disparity study. The goal of the Disparity Study is to determine if there are any disparities between the utilization of minority or women business enterprises (M/WBEs) compared to the availability of M/WBEs in the marketplace who are ready, willing, and able to perform work, and whether such disparities are consistent with the existence of discrimination, and whether there is quantitative or qualitative evidence of discrimination in the private markets in which WSSC Water conducts business. MGT examined the statistical data using the following business categories:

- ◆ Construction;
- ◆ Architecture & Engineering;
- ◆ Professional Services; and
- ◆ Goods & Services

Chapter Sections	
1.1	Introduction
1.2	Study Team
1.3	Overview of Study Approach
1.4	Report Organization
1.5	Glossary of Terms

1.2 Study Team

MGT Project Team

MGT is a Tampa-based research and management consulting firm exclusively working in the public sector. Since 1990, MGT has conducted over 250 disparity and disparity-related studies. The team of experts who dedicated their time, attention, and expertise to this Study includes some of the most experienced and accomplished social science experts in the field of disparity studies:

Dr. Fred Seamon, Executive Vice President/Qualitative Researcher

Dr. Seamon was responsible for ensuring the team had the necessary staff and resources to address the deliverables outlined in the scope of work. Dr. Seamon also conducted policy interviews with WSSC Water officials and stakeholders.

Mr. Andres Bernal, Director/Project Manager/Disparity Study Methodology/Legal Research

Mr. Bernal was responsible for developing, refining, and executing MGT’s methodology and quality standards for the Study, and managing all daily disparity study tasks.

Ms. Vernetta Mitchell, Director/Qualitative Research/Subcontractor Manager

Ms. Mitchell led the qualitative research effort for this Study and managed the subcontractor engagements.

Ms. Lara Opheim, Data Collection Manager

Ms. Opheim led the data collection this Study.

MGT Subconsultants

Chrysalis Collaborations, LLC (WBE)

Conducted anecdotal data collection via in-depth business owner interviews and stakeholder interviews for this Study.

LMD Agency (MBE)

Conducted in-depth business owner interviews.

The Melior Group (WBE)

Conducted the custom census and vendor surveys for this Study.

Minority Business Economic Council (MBE)

Conducted stakeholder interviews and in-depth business owner interviews for this Study.

Walker Benefit Services (MBE)

Walker Benefit Services, LLC (WBS) prepared the community outreach plan for this Study and conducted community outreach.

SkyBase7 (HUB, DBE, and WBE)

SkyBase7 conducted additional custom census and vendor surveys.

1.3 Overview of Study Approach

WSSC Water’s study includes procurement activity from July 1, 2014, through June 30, 2019 (FY2015 – FY2019). The objectives of this study were:

- ◆ Determine whether WSSC Water, either in the past or currently, engages in discriminatory practices, or passively operates in a discriminatory marketplace, in soliciting and awarding contracts in Construction, Architecture & Engineering, Professional Services, Goods & Services to M/WBEs.
- ◆ Determine if a legally justified need exists for the continuation of the MBE program in accordance with the guidelines set forth by the Supreme Court and relevant subsequent cases.

The Study analyzed three areas to determine if there was evidence of business discrimination toward M/WBEs in the WSSC Water market area. The first consisted of analyzing contracting opportunities in the procurement categories to identify if statistical disparities existed. Additionally, data from the US Census and other third-party sources was analyzed to determine the existence of business discrimination in the private sector. Finally, as a way to determine the possible causes behind any disparities found, and to understand the contracting experiences of the vendors in the market area, qualitative data was gathered and analyzed.

The work plan consisted of, but was not limited to, the following major tasks:

- ◆ Establish data parameters and finalize the work plan
- ◆ Conduct a legal review
- ◆ Review WSSC Water’s policies, procedures, and programs
- ◆ Conduct public engagement meetings
- ◆ Determine WSSC Water’s geographic and product markets
- ◆ Conduct market area and utilization analyses
- ◆ Determine the availability of qualified firms
- ◆ Analyze prime and subcontractor utilization and availability for disparity
- ◆ Analyze disparities in the private sector
- ◆ Conduct a survey of business owners

RESEARCH QUESTIONS

These research questions are embedded in relevant chapters throughout this report.

1. Is there factual predicate evidence to support a race- and gender-conscious M/WBE program for WSSC Water?
2. How does case law inform the research methodology for WSSC Water’s disparity study?
3. Are there disparities between the availability and utilization of M/WBE primes and subcontractors?
4. If so, what is the cause of the disparity? Is there other evidence that supports and/or explains why there is disparity?
5. Does WSSC Water passively engage in private sector discrimination?
6. Is there qualitative/anecdotal evidence of discrimination towards M/WBE firms in the marketplace?

- ◆ Collect and analyze anecdotal information
- ◆ Prepare and present draft and final reports for the Study

1.4 Report Organization

In addition to this introductory chapter, WSSC Water’s report consists of:

CHAPTER 2	REVIEW OF POLICIES, PROCEDURES, AND PROGRAMS Chapter 2 provides MGT’s analysis of WSSC Water’s race- and gender-neutral and race- and gender-conscious policies, procedures, and programs.
CHAPTER 3	MARKET AREA AND UTILIZATION ANALYSES Chapter 3 presents the methodology used to determine WSSC Water’s relevant market area and the analyses of vendor utilization by WSSC Water for the procurement of Construction, Architecture & Engineering, Professional Services, and Goods & Services procurement.
CHAPTER 4	AVAILABILITY AND DISPARITY ANALYSES Chapter 4 presents the availability of M/WBEs in WSSC Water’s geographic and product markets and the disparity between the availability and utilization of M/WBEs by WSSC Water.
CHAPTER 5	PRIVATE SECTOR ANALYSIS Chapter 5 analyzes the disparities present in the private sector and the effect on M/WBEs. This private-sector analysis demonstrates why WSSC Water’s race and gender-conscious programs and goals are necessary to ensure it does not become a passive participant in private-sector discrimination.
CHAPTER 6	QUALITATIVE/ANECDOTAL ANALYSIS Chapter 6 contains an analysis of qualitative/anecdotal data collected from the survey of business owners, one-on-one interviews, and public engagement meetings. This chapter also includes the regression analyses of the survey of vendor results.
CHAPTER 7	FINDINGS, ASPIRATIONAL GOALS METHODOLOGY, AND BEST PRACTICES Chapter 7 summarizes the findings of the Study, aspirational goals methodology, and provides program best practices.
APPENDICES	The appendices contain additional analyses and supporting documentation and data. The appendices include the legal framework and an overview of the controlling legal precedents that impact remedial procurement programs, focusing on the United States Court of Appeals for the Fourth Circuit.

1.5 Glossary of Terms

This glossary contains definitions of common terms and acronyms used throughout WSSC Water’s 2022 Disparity Study. Additional and more detailed definitions can be found in various chapters of the report.

Anecdotal	A personal account of experiences of firms doing business with or attempting to do business with WSSC Water. Anecdotal evidence was collected through surveys, interviews, and public hearings.
Aspirational Goal	A benchmark percentage of spending by an agency with a particular group over a period of time. The aspirational goal is typically an annual goal.
Anecdotal Database	A list of utilized firms, registered vendors, and certification lists developed from various sources, including Dun & Bradstreet. This list was used to develop the pool of firms to participate in the anecdotal activities.
Awards	Awards reflect anticipated dollar amounts a prime contractor or vendor are scheduled to receive upon completion of a contract.
Combined Statistical Area	Combined Statistical Area (CSA) are geographic entities defined by the US Office of Management and Budget (OMB) for use by Federal statistical agencies in collecting, tabulating, and publishing Federal statistics.
Contract	All types of WSSC Water agreements, including direct payments and purchase orders, for the procurement of goods and services.
Custom Census	Custom census involves using Dun & Bradstreet as a source of business availability. A short survey is conducted on a random sample of firms supplied by Dun & Bradstreet, requesting specific information, i.e., ethnic and gender status, verification of North American Industry Classification System (NAICS) code.
DBE	An acronym for a Disadvantaged Business Enterprise. A DBE is a small, for-profit business that is at least 51% owned and controlled by one or more socially or economically disadvantaged individuals whose personal net worth does not exceed the US Department of Transportation’s current threshold.
Direct Payment	Payment made to prime contractors or vendors without the development of a contract.
Disparity Index/ Disparity Ratio	The percentage of utilization divided by the percentage of availability for a particular demographic group and multiplied by 100. Disparities were calculated for each of the business categories and by NAICS codes.
Disparity Study	A study that determines if there are any disparities between the utilization of minority or women business enterprises (M/WBEs) compared to the availability of M/WBEs in the marketplace who are ready, willing, and able to perform work, and whether such disparities are consistent with the existence of discrimination,

and whether there is quantitative or qualitative evidence of discrimination in the private markets in which WSSC Water conducts business.

Expenditures	Expenditures are payments made by WSSC Water to primes and payments made by primes to subcontractors.
Good Faith Efforts	Documented evidence of the primes' efforts to meet established project goals to contract with M/WBE firms.
Intermediate Scrutiny	The second level of federal judicial review determines whether specific governmental policies are constitutional. Applies to gender-conscious programs.
Lowest Responsible, Responsive Bidder	A firm that provides the lowest price has responded to the requestor's needs and has not violated statutory requirements for vendor eligibility.
M/WBE	An acronym for a minority or woman-owned business enterprise. A M/WBE is a business at least 51% owned and operated by one or more individuals who are African American, Asian American, Hispanic American, Native American, or Nonminority Women.
Master Utilization Database	A database that maintains firms who have conducted business with WSSC Water and were paid by WSSC Water for goods and services.
Non-M/WBE	An acronym for firms not identified as a minority- or women-owned.
Passive Discrimination	The act of perpetuating discrimination through infusion of monetary funding to a discriminatory market or failure to attempt to remedy current/past discrimination in the market area.
Prima Facie	Evidence that is legally sufficient to establish a fact or a case unless disproved or rebutted.
Prime	The contractor or vendor to whom WSSC Water issues a purchase order or contract.
Private Sector	The for-profit part of the national economy that is not under direct government control.
Procurement Category	The type of service or good provided under a contract awarded. The categories analyzed are Construction, Architecture & Engineering, Professional Services, and Goods & Services.
Project Goals	Also known as contract goals, goals placed on an individual project or contract, as opposed to aspirational goals established on overall agency spending.
Public Sector	The nonprofit part of the economy that is controlled by the government.
PUMS	An acronym for Public Use Microdata Sample. PUMS contains records for a sample of housing units with information on the characteristics of each unit and each

person in it. PUMS files are available from the American Community Survey (ACS) and the Decennial Census.

Purchase Order	A commercial document and first official offer issued by a buyer to a seller, indicating types, quantities, and agreed prices for products or services.
Regression Analysis	A technique for modeling and analyzing several variables when the focus is on the relationship between a dependent variable and one or more independent variables. More specifically, regression analysis helps one understand how the typical value of the dependent variable changes when any one of the independent variables is varied. In contrast, the other independent variables are held constant. For this study, a multivariate regression analysis was used to examine the influence of an owner's race and gender on gross revenues reported by firms participating in a survey of vendors administered during the study.
Relevant Geographic Market	The geographical area where the firms awarded the majority of WSSC Water contract dollars are located.
Product Market	The NAICS codes that show the granular commodities and services that WSSC Water procures.
SLBE Program	The Small Local Business Enterprise (SLBE) Program is a race- and gender-neutral program, administered by the Office of Supplier Diversity & Inclusion (OSDI).
Sole Source	The contracting or purchasing of goods or services, without bidding, when performance or price competition for a product are not available; when a needed product is available from only one source of supply; or when standardization or compatibility is the overriding consideration.
Statistically Significant	The likelihood that a result or relationship is caused by something other than mere random chance. Statistical hypothesis testing is traditionally employed to determine if a result is statistically significant or not. This provides a "p-value" representing the probability that random chance could explain the result.
Strict Scrutiny	The highest level of federal judicial review to determine whether certain governmental policies are constitutional. Applies to race-conscious programs.
Subcontractor	A vendor or contractor providing goods or services to a prime contractor or vendor under contract with WSSC Water.
Utilization	Examines the expenditures made to primes and subcontractors in WSSC Water's geographic and product market area for each procurement category. The utilization data is presented as the dollars spent and the percentage of the total dollars by racial, ethnic, and gender classification.

2. Review of Policies, Procedures, and Programs

2.1 Introduction

Procurement and contracting are essential functions of the Washington Suburban Sanitary Commission (WSSC Water). As such, procurement policies, procedures, and programs significantly impact WSSC Water’s departments and businesses seeking opportunities to provide goods and services required by WSSC Water. In 2015, MGT conducted a disparity study on behalf of WSSC Water. An essential part of the 2015 Disparity Study was a review of policies, procedures, and programs. MGT also examined WSSC Water’s policies, procedures, and programs to conduct the current study. A review of procurement policies, procedures, and programs is traditionally part of a comprehensive disparity study. The policy review is useful for identifying changes since WSSC Water’s last disparity study. In addition, the review helps to highlight efforts undertaken by WSSC Water to eliminate discrimination.

Chapter Sections	
2.1	Introduction
2.2	Methodology
2.3	Procurement Structure and Environment
2.4	WSSC Water Business Diversity Inclusion Programs
2.5	Conclusions

MGT’s review of policies and procedures is presented in five major sections. **Section 2.2** describes the methodology used to conduct the review. The remaining sections summarize procurement policies, procedures, programs, and the structure and environment in which procurement and contracting occur. Our review of policies and procedures in this chapter is intended to provide the foundation for analyzing utilization and availability in **Chapter 3** and **Chapter 4** and the findings and best practices in **Chapter 7**.

2.2 Methodology

The following section summarizes the overall approach and methodology undertaken to review WSSC Water’s procurement policies and programs. A multi-faceted approach was used to review and prepare this summary, including collecting and reviewing source documents and materials related to procurement and contracting. The review also included meetings with staff in the Procurement Office, Office of Supplier Diversity & Inclusion (OSDI), General Counsel’s Office, and other WSSC Water Departments. MGT used the meetings to understand better the environment and context in which procurement occurs and how MBE and SLBE utilization are impacted. MGT also navigated WSSC Water’s website to review information and resources available internally to WSSC Water’s staff and firms interested in procurement and contracting opportunities with WSSC Water. The policy review was conducted with the full cooperation of WSSC Water staff, who provided data, information, insights, and assistance to MGT throughout the policy review. At no time did MGT not receive the critical cooperation and responsiveness in conducting the policy review. Without the support and collaboration received by MGT, completing the policy review and other components of this study would have been difficult. The policy review included the following:

- ◆ Finalizing the scope of the policy review

- ◆ Collection, review, and summarization of WSSC Water’s procurement/contracting policies and procedures
- ◆ Collection, review, and summarization of other information and data pertinent to the policy review and WSSC Water programs
- ◆ Interviews/meetings with WSSC Water staff to document how policies are implemented and significant changes since the 2015 Disparity Study. As necessary, follow-up contacts were made to obtain additional information about the application of policies and the impact of policies on key users
- ◆ Review of applicable WSSC Water rules, regulations, and federal and state laws governing contracting and procurement
- ◆ Review of previous disparity studies conducted in the geographical market

Finally, to provide further context for the policy review, MGT collected and reviewed the documents and information itemized in **Table 2-1**.

TABLE 2-1. DOCUMENTS REVIEWED DURING POLICY AND PROCEDURES REVIEW

INDEX	DESCRIPTION
Procurement Related Documents	
1.	WSSC Water Code of Regulations Title 6 Procurement
2.	WSSC Water, Procurement Process OSDI Integration Commissioner Overview May 20, 2020
3.	WSSC Water Supplier Guide for Supplier Registration and Solicitation Access, WSSC Water Supplier Portal 11/9/2015
4.	WSSC Water General Conditions Professional Services Updated November 15, 2019
5.	WSSC Water Resolution 2016-2133 General Manager Delegation of Authority
Other Related Documents	
6.	Maryland Annotated Code, Public Utilities 17-402.1 (b)
7.	WSSC Water Fiscal Year 2022 Approved Budget
8.	WSSC Water Organization Chart
9.	WSSC Water, OSDI Organization Chart
10.	WSSC Water, OSDI Memo Request Form
12.	WSSC Water, OSDI Option Term Memo Request Form
13.	WSSC Water, FY 2015 Small, Local and Minority Business Enterprise Performance Results
13.	WSSC Water Small, Local and Minority Business Enterprise Program Performance Results Report FY 2016
14.	WSSC Water FY 2017 Office of Supplier Diversity & Inclusion Programs’ Performance Results Report
15.	WSSC Water Fiscal Year 2018 Office of Supplier Diversity & Inclusion Programs Performance Report
16.	WSSC Water Office of Supplier Diversity & Inclusion Programs Performance Report Fiscal Year 2019
17.	WSSC Water OSDI Outreach Events FY 2015-FY 2019
	<i>Disparity Studies</i>

INDEX	DESCRIPTION
18.	MGT, Minority Business Enterprise Disparity Study for the Washington Suburban Sanitary Commission, 2015
19.	BBC, WSSC Water 2005 Disparity Study
20.	NERA, Business Disparities in the Maryland Market Area, February 2017
21.	NERA, Disadvantaged Business Enterprise Disparity Study, Prepared for the Maryland Department of Transportation (2013)

2.3 Procurement Structure and Environment

The structure and environment in which procurement and contracting occur were useful in understanding how procurement policies are operationalized to provide the construction, operation, and maintenance of water supply and sanitary sewage systems in Montgomery and Prince George’s Counties, Maryland. WSSC Water’s organization structure was helpful for placing procurement and contracting into proper context and understanding the role of the Procurement Office, Office of Supplier Diversity & Inclusion, and other WSSC Water Departments. **Exhibit 2-1** shows the organization structure for WSSC Water and **Exhibit 2-2** shows the organization structure for the Office of Supplier Diversity & Inclusion.

With a budget of \$1.5 billion, including \$852.1 million for operating expenses and \$703.7 million for capital expenses, procurement and contracting are essential in providing water and sewer services to almost 2 million residents of Montgomery and Prince George’s Counties.² To be responsive in providing water and sewer services, procurement and contracting are ongoing. Organization units such as the Procurement Office, Office of Supplier Diversity & Inclusion, and other WSSC Water Departments are continuously engaged in procurement and contracting activity. According to WSSC Water’s Code of Regulations, procurement policies are designed:

- ◆ To simplify, clarify, and modernize the regulations governing procurement by WSSC Water
- ◆ To permit the continued development of procurement policies and practices by WSSC Water
- ◆ To promote consistency with and among the procurement laws and regulations of WSSC Water
- ◆ To provide for increased public confidence in the procedures followed in public procurement
- ◆ To ensure the fair and equitable treatment of all persons who deal with the procurement system of WSSC Water
- ◆ To foster effective broad-based competition within the free enterprise system
- ◆ To provide safeguards for the maintenance of a procurement system of quality and integrity, and

² WSSC Water Fiscal Year 2022 Approved Budget.

- ◆ To obtain in a transparent, cost-effective, and responsive manner the goods and supplies, services, professional services, architectural and engineering services, and construction services required by WSSC Water to better serve all ratepayers in the Washington Suburban Sanitary Commission District.³

In exercising the authority under the Code of Regulations, there is a clear expectation to:

- ◆ Obtain goods and services of good quality at a fair and reasonable cost for WSSC Water
- ◆ Maximize the purchasing value of public funds
- ◆ Adhere to laws, regulations, processes, and procedures
- ◆ Obtain goods and services promptly to meet WSSC Water's needs⁴

In acquiring goods and services to meet internal and external needs, WSSC Water staff perform a broad spectrum of activities aligned with procurement regulations and policies that govern all aspects of procurement and contracting and MBE and SLBE participation. Interviews and meetings with staff provided valuable insight into procurement and contracting roles and responsibilities. Discussions with staff focused mainly on procurement and contracting practices and processes and their impact on MBE and SLBE participation. Based upon conversations with staff, since the 2015 Disparity Study, there have been few significant changes in procurement policies. One major change is integrating the data from the 2015 Disparity Study into the Code of Regulations and IT systems that support procurement and contracting. MGT's review concluded that WSSC Water's staff are very knowledgeable about procurement and contracting and MBE/SLBE regulations, requirements, and programs. Based on MGT's review, WSSC Water's procurement policies are well documented, relatively user-friendly, and facilitated by the following:

- ◆ Understanding and acceptance of procurement and contracting policies
- ◆ Routine application and execution of procurement and contracting policies
- ◆ Clear delineation of roles, responsibilities, and coordination of the different phases of the procurement and contracting process from identifying the need to contract award
- ◆ Coordination and support to ensure MBE and SLBE participation
- ◆ Compliance and monitoring

Overall, staff tended to be complimentary about procurement processes and efforts to ensure MBE and SLBE participation. The interviews and meetings with WSSC Water staff revealed a great deal of sensitivity and a sense of urgency about participation and utilization of small, minority, and women-owned businesses. In fact, throughout MGT's meetings with WSSC Water staff, it was clear that remedying discrimination against MBEs and SLBEs is a strategic priority for the entire organization. Staff comments also revealed an emphasis on ensuring policies and procedures are applied fairly and routinely followed.

³ Title 6, Chapter 6.15.010(b), WSSC Water Code of Regulations.

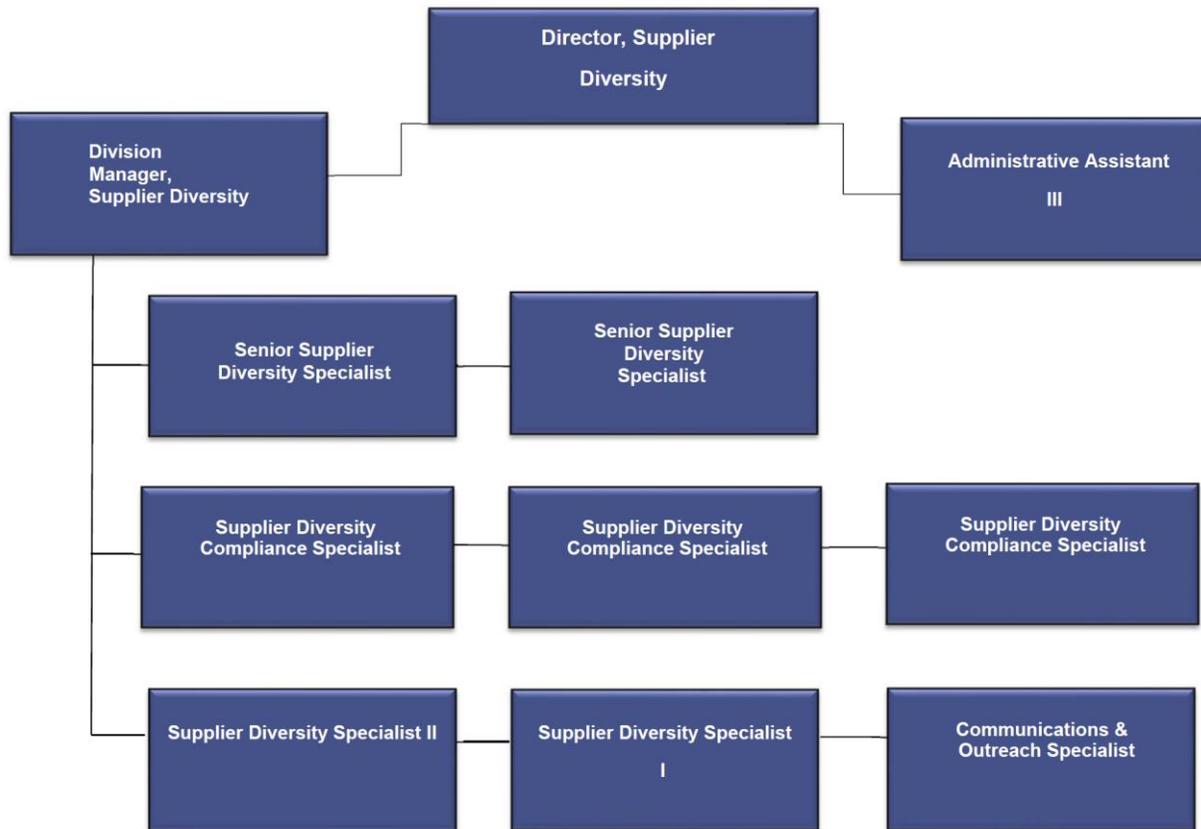
⁴ Title 6, Chapter 6.15.010(b), WSSC Water Code of Regulations.

EXHIBIT 2-1. WSSC WATER ORGANIZATION CHART



Source: MGT adapted from WSSC Water, 2022. Original provided by WSSC Water:
<https://www.wsscwater.com/sites/default/files/2022-09/OrgChart%200922.pdf>

EXHIBIT 2-2. OFFICE OF SUPPLIER DIVERSITY & INCLUSION ORGANIZATION CHART



Source: WSSC Water Office Supplier Diversity & Inclusion.

Exhibit 2-1 shows that the Procurement Office and the Office of Supplier Diversity & Inclusion are housed in the Administration Branch of WSSC Water. The Procurement Office is responsible for purchasing goods and services and obtaining maximum value for each dollar spent. According to established policies and procedures for advertisement, solicitation, and approval, procurement staff perform an essential role in acquiring and procuring goods and services. In carrying out procurement functions, staff adhere to the policy objectives outlined in Md. Ann. Code, Public Utilities Article, Title 20, Subtitle 2, which provide ample policy guidance for supporting and promoting diversity and inclusion in WSSC Water procurement and contracting.

The organization structure for the Office of Supplier Diversity & Inclusion is shown in **Exhibit 2-2**. Organizationally, OSDI's role is critical in realizing WSSC Water's commitment to equity and inclusion in procurement and contracting. Since 1978, the OSDI has administered WSSC Water's race- and gender-conscious MBE Program. The OSDI has administered WSSC Water's race- and gender-neutral SLBE Program since 2001. Policies related to the MBE Program are found in Chapter 6.30 in the WSSC Water Code of Regulations, and SLBE Program policies are found in Chapter 6.35 in the WSSC Water Code of Regulations. Chapter 6.30 and Chapter 6.35 are precise in their MBE and SLBE programs' policy intent. The objectives found in Chapter 6.30 are as follows:

- (1) To eliminate or minimize statistically significant underutilization of minority-and-women-owned business enterprises in those contracting categories for those ethnicities in which such utilization has been found to exist. In pursuing this objective, the Commission may use race-and-gender conscious remedies for addressing statistically significant underutilization within its contract participation, as a last resort only after considering use of race-and gender-neutral means and finding that they alone will likely be insufficient to remedy the effects of identified discrimination.
- (2) To increase participation of ready, willing, and able minority-and women-owned business enterprises aware of WSSC Water contracting opportunities and who avail themselves of those opportunities by competing for WSSC Water prime contracting and subcontracting opportunities.⁵

MGT noted the 2015 Disparity Study is referenced throughout Chapter 6.30. Based on MGT's disparity study experience, few disparity studies have been similarly integrated into policies, and WSSC Water is commended.

The policy objectives found in Chapter 6.35 for the SLBE Program are outlined as follows:

- (1) Increasing the participation of SLBEs in WSSC Water contracting and, to the extent possible, eliminating through race-and gender-neutral means any disparities in the participation of minority business enterprises or women business enterprises on WSSC Water contracts
- (2) Periodically evaluating the progress of the SLBE Program in meeting its objectives using accumulated availability and utilization data
- (3) Providing accountability and accuracy in setting requirements and in reporting program results utilizing Web-Based Compliance Systems or other related systems (i.e., WSSC Water's Supplier Portal System and Prism or any successor Web-Based Compliance Systems) capable of identifying the universe of firms that are ready, willing, and able and interested in bidding on or performing on WSSC Water contracts
- (4) Providing a means of tracking actual WSSC Water bids, contract awards, and prime contracts and direct subcontract payments to registered bidders or respondents based on firm ownership status, commodity or sub-industry codes, firm location, and firm size. Accordingly, prime contractors and subcontractors will be required to register and input data into WSSC Water's Web-Based Compliance System or other related systems as one of the conditions of engaging in business with WSSC Water, and
- (5) The SLMBE Office,⁶ in concurrence with the Chief Procurement Officer whenever necessary, shall:
 - (i) Oversee and implement this chapter
 - (ii) Report to WSSC Water and the public on at least an annual basis WSSC Water's progress towards satisfying SLBE program objectives;

⁵ Title 6, Subtitle II Chapter 6.30.020 (b) (1)(2) WSSC Water Code of Regulations.

⁶ The SLMBE Office changed its name to the Office of Supplier Diversity & Inclusion since regulation adoption Chapter 6.30.030(x).

- (iii) Recommend or grant SLBE program waivers, improvements, and adjustments to the Commission’s goal setting and other SLBE functions;
- (iv) Provide substantive input in forecasting contracting opportunities and contract specifications (procurement process) review process to be undertaken in advance of the issuance of WSSC Water invitation for bids (IFBs) and request for proposals (RFPs) to ensure that contract bid specifications are not unnecessarily restrictive and unduly burdensome to SLBE firms;
- (v) Develop and implement extensive outreach and SLBE vendor/supplier development events;
- (vi) Receive and analyze external and internal information, including statistical data and anecdotal evidence it deems appropriate to accomplish its duties effectively;
- (vii) Monitor and support the implementation of the procedures in this chapter;
- (viii) Meet with internal stakeholders as program objectives;
- (ix) Enforce contractor compliance with contract participation goals, and ensure that the overall SLBE program goals and objectives are met; and
- (x) Establish the minimum SLBE subcontracting or other SLBE program preference(s) on a contract-by-contract basis.⁷

Solicitation Process

Based on MGT’s experience, efficient and effective coordination and execution of the solicitation process depends on knowledgeable and skilled staff and well-executed policies and procedures for advertisement, solicitation, vendor evaluation/selection, contract negotiation, and approval. **Exhibits 2-3 to 2-5** show the types of WSSC Water solicitations, contracts, and approval thresholds. The approval thresholds in **Exhibit 2-5** reflect changes authorized in WSSC Water Resolution 2016-2133 which increased the General Manager/CEO’s levels of contracting and change order authority. Based on MGT’s experience such increases in contracting and change order authority provides greater contracting flexibility and can significantly impact project delivery and execution. Such changes are also important because they can potentially impact MBE and SLBE participation. **Exhibit 2-6** provides an overview of WSSC Water’s solicitation and award process. The exhibits are intended to provide a high-level overview and not reflect the “nuts and bolts” of the solicitation process at WSSC Water.

⁷ Chapter 6.35.020 (b) (5) WSSC Water Code of Regulations.

EXHIBIT 2-3. WSSC WATER TYPES OF SOLICITATIONS

Solicitation Type	Description	Contracting Area
Invitation for Bid (IFB) ⁸	A competitive sealed bid solicitation. The basis of the award is to the lowest responsive and responsible bidder.	<ul style="list-style-type: none"> • Goods & Services • Construction
Multi-Step Invitation for Bid (MS IFB) ⁹	Bidders submit unpriced technical offers. Pricing from acceptable technical offers is considered. The basis of the award is to the lowest responsive and responsible bidder.	<ul style="list-style-type: none"> • Goods & Services • Construction • Professional Services
Request for Proposal (RFP) ¹⁰	A competitive solicitation whereby vendors propose solutions to problems or business requirements. The basis of the award is the best value considering the evaluation factors.	<ul style="list-style-type: none"> • Goods & Services • Construction • Professional Services • Architecture & Engineering

Source: WSSC Water Code of Regulations.

EXHIBIT 2-4. TYPES OF CONTRACTS¹¹

Contract Type	Description	WSSC Water Contract Examples
Basic Ordering Agreement (BOA)	Entails establishing a term contract and accomplishing work via task orders.	<ul style="list-style-type: none"> • Architecture & Engineering & Professional Services • IT management support services
Design-Bid-Build (DBB) ¹²	Entails separate contracts: the first for architectural and engineering services to design the project; and the second for construction according to the design.	<ul style="list-style-type: none"> • Building enhancements • Lab Services building expansion
Indefinite Delivery, Indefinite Quantity (IDIQ) ¹³	Construction / Utility Services contracts accomplishing work via task orders.	<ul style="list-style-type: none"> • Construction and Utility Services • Water main replacement and rehab
Progressive Design-Build (PDB)	A single award for both design and construction services by one contractor ¹⁴ . Primary features are open book costs and off-ramp capabilities.	<ul style="list-style-type: none"> • Substation replacement • Bioenergy project

Source: Procurement Process and OSDI Integration Commissioner Overview May 20, 2020 (PPT presentation page 7).

⁸ Chapter 6.30.030 (q) WSSC Water Code of Regulations.

⁹ Chapter 6.15.310 (p) (1) WSSC Water Code of Regulations.

¹⁰ Chapter 6.30.030 (ff) WSSC Water Code of Regulations.

¹¹ Chapter 6.15.410 (e) (1) WSSC Water Code of Regulations.

¹² Chapter 6.15.070 (v) WSSC Water Code of Regulations.

¹³ Chapter 6.15.410 (b) (14) WSSC Water Code of Regulations.

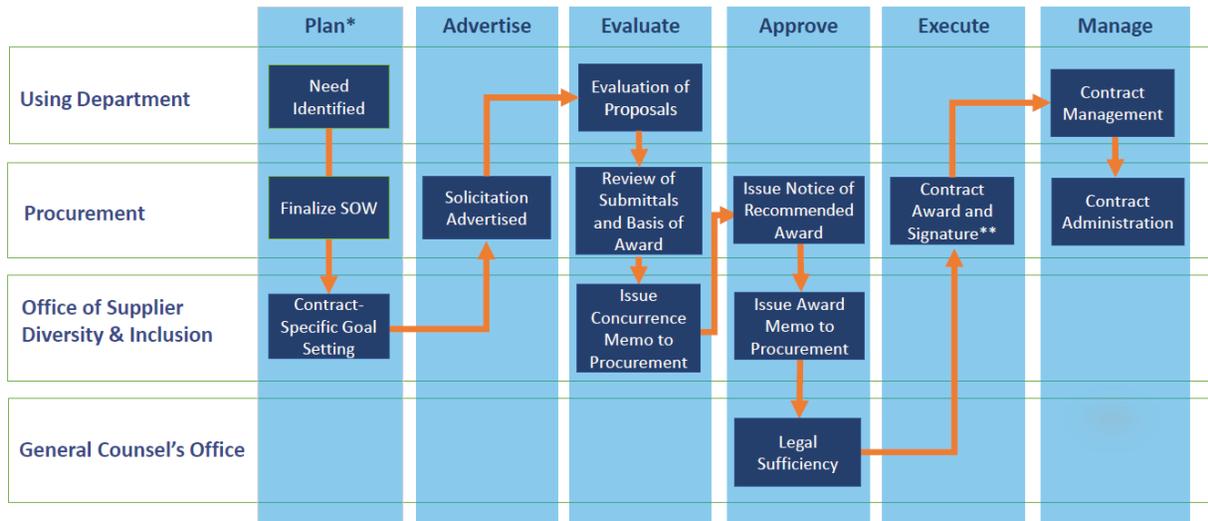
¹⁴ Chapter 6.15.070 (x) WSSC Water Code of Regulations.

EXHIBIT 2-5. THRESHOLD FOR COMMISSION APPROVAL¹⁵

Contracting Area	New Contract	Change Order	Option Terms
Goods & Services	Exceeding \$1.2M annually	<ul style="list-style-type: none"> Exceeding \$500K Cumulative 	Value exceeds the base term, or the value was not previously approved.
Construction	Exceeding \$1.2M in total	<ul style="list-style-type: none"> Individual water/sewer projects: \$400K or 50% of the bid price, whichever is less. Major construction projects (e.g., facilities): \$1M or 5% cumulative bid price, whichever is greater. 	
Professional Services	Exceeding \$1.0M in total	<ul style="list-style-type: none"> Exceeding \$150K Cumulative 	
Architecture & Engineering	Exceeding \$1.0M in total	<ul style="list-style-type: none"> \$0 --\$500K: Exceeding \$125K Cumulative •\$500K --\$1M: Exceeding \$250K Cumulative •\$1M+: Exceeding \$500K Cumulative 	

Source: WSSC Water Resolution 2016-2133 General Manager Delegation of Authority pages 2-5.

EXHIBIT 2-6. SOLICITATION AND AWARD PROCESS



* GCO provides advice on solicitations on an as-needed basis.
**May require Commissioner approval based on the dollar value.

Source: Procurement Process and OSDI Integration Commissioner Overview May 20, 2020 (PPT presentation page 8).

Concerning the structure and environment in which procurement and contracting take place, based on MGT's review, several key points are particularly noteworthy:

- ◆ WSSC Water's procurement structure and solicitation process are well defined, with clearly defined roles and responsibilities guided and constrained by policies that are well represented.

¹⁵Chapter 6.15.010 (a) WSSC Water Code of Regulations.

- ◆ Operationally, the level of coordination and communication between the Procurement Office and WSSC Water departments can be significantly improved. For example, the Procurement Office must often wait on complete scopes of work and requisitions from departments and receive frequent requests for expedited contract action. The accuracy and completeness on the front end of the solicitation process by departments has a ripple effect that impact solicitation cycle time. Cycle time can be improved by more planning and concise statements of work from WSSC Water departments on the front end and significantly reduce the review time by the General Counsel's Office, which is impacted by needed revisions, clarifications, or corrections by departments. The major factor in turnaround time by the General Counsel's Office is determined by what is received from WSSC Water departments in terms of accuracy, clarity, and completeness.
- ◆ From a WSSC Water department perspective, there may be an opportunity to revisit how MBE goals are calculated for specific projects and certain types of work. Additionally, there may be an opportunity for WSSC Water departments to increase awareness of the goal setting process conducted by the Office of Supplier Diversity & Inclusion.
- ◆ Perceptions and opinions were consistent about improving systems, processes, and tools that facilitate procurement and contracting. It was noted that the previous Web-Based Compliance System had been replaced with a fully integrated system that houses WSSC Water's Procurement and Financial records and upgrades to the Supplier Portal will provide greater transparency and visibility to data and information.
- ◆ COVID 19 has resulted in adjustments and pivots, which may continue post-COVID 19.
- ◆ Ensuring inclusive and equitable purchasing is taken very seriously. The underlying premise of the MBE and SLBE Programs is to remedy discrimination in the markets in which WSSC Water operates.
- ◆ Overall, the staff was very open and forthcoming about progress since the last disparity study and opportunities to improve and enhance operations, systems, and processes related to procurement/contracting and the utilization of MBEs and SLBEs.

2.4 WSSC Water Business Diversity Inclusion Programs

The major impetus for this disparity study is to determine whether or not there is evidence of discrimination against minority-owned businesses in the markets in which WSSC Water does business. In addition, the continuation of WSSC Water's race- and gender-based MBE Program depends on this Study's outcomes. MGT's experience has shown that the successful inclusion of small, minority, and women-owned businesses are dependent upon:

- ◆ Policies and procedures that are consistently followed;
- ◆ Vigorous enforcement and compliance mechanisms;
- ◆ Effective outreach, information, and assistance;
- ◆ And staff who are supportive and sensitive to the inclusion of small, minority, and women-owned businesses.

As discussed throughout this chapter, WSSC Water has comprehensive policies to remedy and prevent discrimination. MGT felt it was important to review resources and assistance that contribute to inclusive and equitable procurement and contracting. To conduct this component of the policy review, in addition to interviews and meetings with WSSC Water staff, MGT relied heavily on source documents in **Table 2-1** and the resources and information on WSSC Water’s website.

MBE Program Policy

The purpose of the MBE Program and related policies and objectives are briefly stated in Chapter 6.30 WSSC Water Code of Regulations. According to 6.30.010, the goal of the MBE Program is “to facilitate the participation of responsible certified minority business enterprises (MBEs) in design/build and construction contracts awarded by WSSC Water” and “to facilitate the participation of responsible certified minority business enterprises in goods and services contracts awarded by WSSC Water.” Section 6.30.020 policies include avoidance of active or passive discrimination and WSSC Water’s compelling interest to remedy effects of marketplace discrimination and narrowly tailoring remedies to “promote greater availability, capacity development, and contract participation by minority and women-owned business enterprises in WSSC Water contracts.”

SLBE Program Policy

SLBE purpose and policies are found in 6.35.010 and 6.35.020. According to 6.35.010, the SLBE Program is “intended to assist small businesses located in Montgomery and Prince George’s County by establishing a competitive business program or subcontracting or other appropriate preferences in connection with the award of construction, architectural [sic] and engineering (A&E), goods and services, and professional services contracts by WSSC Water.” Policies in 6.35.020 address the annual review of SLBE eligibility criteria and administrative procedures to ensure program effectiveness and program integrity.

According to Chapter 6.35.040, the Office of Supplier Diversity & Inclusion may approve firms registered in WSSC Water’s Supplier Portal System as a SLBE in the SLBE Program. A firm seeking SLBE approval must attest that it:

- (1) Is an independently owned and operated for-profit business concern that is not dominant in its field of operation and that is performing a commercially useful function,
- (2) Meets size standard eligibility requirements for SBEs as defined under the State of Maryland regulations adopted by the Department of General Services according to the State Finance and Procurement Article 14-2003 Annotated Code of Maryland.
- (3) Is a LBE as defined in WSSC Water 6.35.030 with a principal place of business or significant employment presence in Prince George’s County or Montgomery County, Maryland.
- (4) Has been established for at least one year or the principals of the business have at least three years of relevant experience before forming or joining the business; and
- (5) Has not received more than \$2 million in WSSC Water contract payments as a prime contractor and direct subcontractor in open competition from WSSC Water in the year preceding the date of the application.

MBE Program Results

The section which follows includes **Exhibits 2-7** through **2-11** depicting MBE performance results (contract awards and contract payments) for FY 2015 through FY 2019. It is noted that contract payments are considered a lagging indicator. For example, in FY 2015 (**Exhibit 2-7**), WSSC Water’s total contract awards for M/WBEs amounted to \$187,869,377 while M/WBE total payments amounted to \$134,409,006. Similar patterns are reflected in the results for each Fiscal Year. Overall, the exhibits demonstrate the results of the coordination and collaboration between the Office of Supplier Diversity & Inclusion, the Procurement Office, and WSSC Water Departments with respect to MBEs in WSSC Water contracting.

EXHIBIT 2-7. FISCAL YEAR 2015 M/WBE PERFORMANCE RESULTS

Figure 1: FY 2015 M/WBE Contract Payments

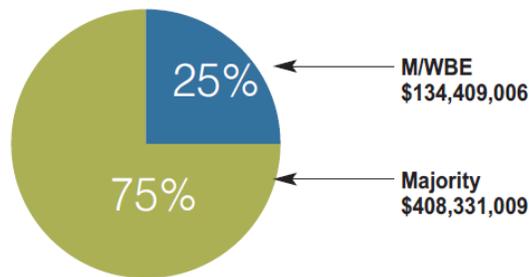
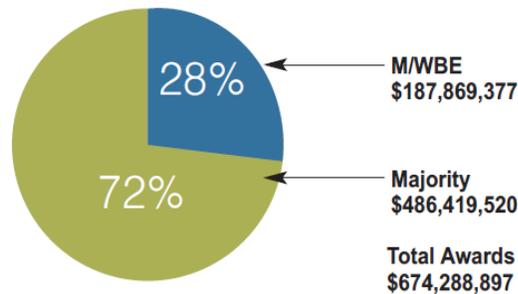


Figure 3: FY 2015 M/WBE Contract Awards



Source: WSSC Water SLMBE Performance Results, FY 2015.

EXHIBIT 2-8. FISCAL YEAR 2016 M/WBE PERFORMANCE RESULTS

Figure 1: FY 2016 M/WBE Total Contract Payments

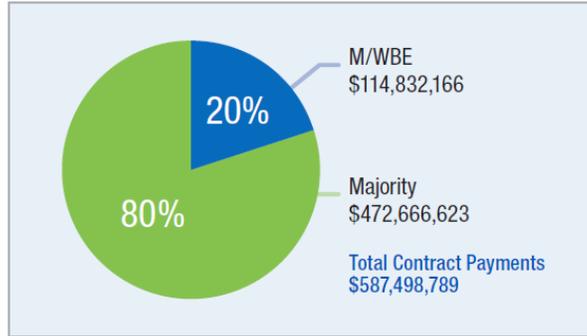
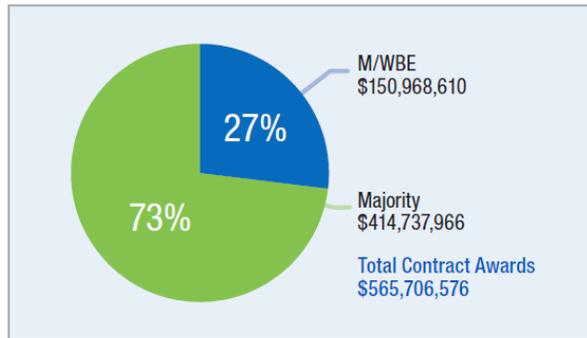


Figure 3: FY 2016 M/WBE Total Contract Awards



Source: WSSC Water SLMBE Performance Results, FY 2016.

EXHIBIT 2-9. FISCAL YEAR 2017 M/WBE PERFORMANCE RESULTS

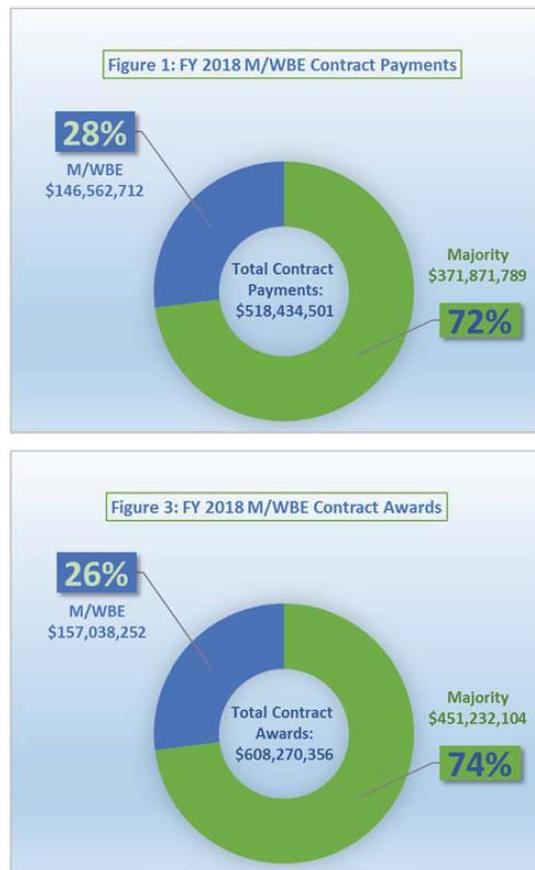
FIGURE 1: FY 2017 M/WBE TOTAL CONTRACT PAYMENTS





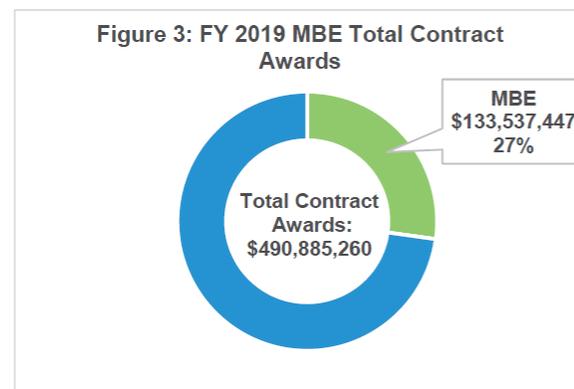
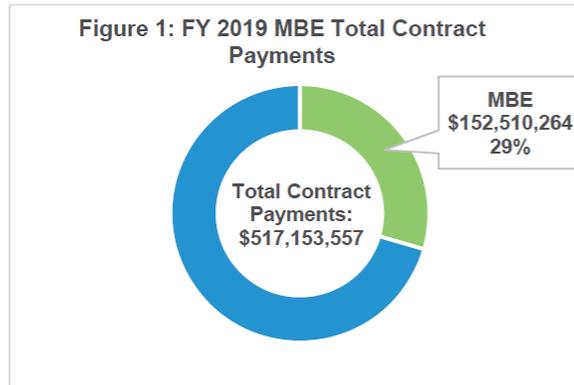
Source: WSSC Water SLMBE Performance Results, FY 2017.

EXHIBIT 2-10. FISCAL YEAR 2018 M/WBE PERFORMANCE RESULTS



Source: Fiscal Year 2018 Office of Supplier Diversity & Inclusion Programs Performance Report.

EXHIBIT 2-11. FISCAL YEAR 2019 MBE PROGRAM PERFORMANCE RESULTS



Source: Office of Supplier Diversity & Inclusion Programs
Performance Report Fiscal Year 2019.

The results shown above can be directly attributed to the coordination and collaboration between OSDI, the Procurement Office, and other WSSC Water Departments. Another critical factor is the support and commitment of WSSC Water's Leadership to diversity in procurement and contracting. The following sections provide an overview of selected MBE program components that contribute to the above performance results.

Doing Business with WSSC Water

WSSC Water's business inclusion efforts are aligned with the objectives in Chapter 6.30 related to eliminating or minimizing business discrimination and the objectives in Chapter 6.35 related to increasing participation of SLBEs in WSSC Water's contracting. In achieving the objectives in Chapter 6.30 and Chapter 6.35, the work performed by the Office of Supplier Diversity & Inclusion and the Procurement Office is important and essential. The assistance and support provided to MBEs and SLBEs is critical in terms of successfully doing business with WSSC Water. Also important is the coordination and collaboration between the Office of Supplier Diversity & Inclusion and the Procurement Office which is a major reason for WSSC Water's success to date. Several efforts and strategies that have been effective and particularly noteworthy include the following:

- ◆ Collaborative goal-setting process, OSDI's integral/embedded involvement in all formal solicitations at WSSC Water

- ◆ Early and ongoing outreach to engage the vendor community in upcoming solicitations prior to advertisement
- ◆ 1:1 vendor meetings/information sessions
- ◆ Specific targeted outreach for solicitations/matchmaking events
- ◆ Partnerships with other jurisdictions/organizations to educate the vendor community on how to do business with WSSC Water, Procurement Processes, OSDI Programs
- ◆ World-class compliance system to track MBE payments/awards with direct validation from MBE firms
- ◆ Publishing of annual performance metrics to Commissioners, online and directly to the Md. General Assembly

The above represents a small but significant sample of efforts undertaken by the Office of Supplier Diversity & Inclusion in building relationships, expanding opportunities, and cultivating and supporting the growth and expansion of M/WBEs. Since WSSC Water's MBE Program was codified in WSSC Water Standard Procedure (SP) MBE 11-01, and currently exists as WSSC Code of Regulations Chapter 6.30, the relationships cultivated with the business community and professional and trade organizations have contributed to the performance results highlighted in **Exhibits 2-7** through **2-11**. Supplier advocacy, compliance, outreach, and supplier development have been the cornerstones of the Office of Supplier Diversity & Inclusion's efforts and strategies resulting in the performance results shown earlier. Also noteworthy is that these cornerstones have remained intact throughout COVID, and OSDI has made the necessary pivots and adjustments to ensure continued engagement with the business community and professional and trade organizations.

In today's environment, access to information, resources, and staff who can assist is essential. Typically, an organization's website is the starting point for seeking information about the contracting and procurement process and opportunities. MGT navigated WSSC Water's website to determine procurement processes, resources, and assistance available to all vendors and WSSC Water Departments. MGT paid particular attention to the Contracting & Business site that provides information and resources related to contracting opportunities with WSSC Water. Quick links on the site included A&E Construction bids, procurement regulations for the MBE/SLBE Programs, and the Web-Based Compliance System. The User Manual Supplier Portal Vendor Community September 2020 Version 2.0 prepared by the Procurement Office was reviewed in detail and was found to be user-friendly and very informative. Overall, MGT found the information and resources throughout the site and various links very useful. The FAQs for external users included sections for Supplier Portal System, Web-based Compliance System, Payments and Invoices, Contracts and Subcontracting were extremely helpful.

In summary, WSSC Water's website is robust and comprehensive. The website, coupled with the assistance and efforts noted above by OSDI and the Procurement Office, provides ample guidance for businesses seeking opportunities with WSSC Water for the first time and businesses with more experience with WSSC Water's procurement and contracting. In the subsections which follow, selected requirements and components that facilitate and contribute to doing business with WSSC Water and the utilization of MBEs and SLBEs are summarized.

Vendor Registration

The WSSC Water Supplier Portal System is an essential resource and crucial first step in seeking procurement and contracting opportunities with WSSC Water. All vendors must register in the WSSC Water Supplier Portal System to bid with WSSC Water. The registration process includes providing business information, including company profile data, MBE status, products and services provided, and other information. Registration is free for all vendors. According to Chapter 6.05.030, only firms registered in WSSC Water’s Supplier Portal System at the time of bid opening or proposal submission due date are eligible to enter into contracts with WSSC Water. MGT reviewed the most recent version of the Supplier Portal User Manual dated September 2020. The stated purpose of the User Manual is “to educate users and be used by a supplier/vendor to gain familiarity with the WSSC Water Supplier Portal.” Starting with “Get Started-Register with WSSC Water” MGT’s review concluded the User Manual was comprehensive and relatively user-friendly. However, Section 3.5, which requires providing various attachments, might be challenging for a novice user unaccustomed to attaching documents.

Certification and Approval

Certification for MBEs and WSSC Water approval for SLBEs may be beneficial for firms seeking procurement and contracting opportunities with WSSC Water. The intent of the MBE program is to “facilitate the participation of responsible certified minority business enterprises,” as specified in Regulation Chapter 6.30.019. According to Chapter 6.30.240, the Office of Supplier Diversity & Inclusion is required to verify MBE certification status. WSSC Water recognizes MBE certification from several agencies, including the Maryland Department of Transportation, Prince George’s County Office of Central Services, District of Columbia Department of Small and Local Business Development, Capital Region Minority Supplier Development Council, and Women President’s Educational Organization. The Office of Supplier Diversity & Inclusion may approve and certify a firm claiming SLBE status upon receipt of a completed application with supported documentation¹⁶.

Good Faith Efforts

Good faith efforts are essential to the MBE Program and SLBE Program. The enforcement efforts in both programs rely on Good Faith Effort provisions outlined in Chapter 6.30. MGT’s experience has shown that stringent and consistently monitored and enforced good faith efforts can significantly alter prime contractor behavior. The following requirements are set forth in Chapter 6.35.260:

1. Provide a copy of the advertisement(s) in local or trade publications and the services they are attempting to subcontract. This effort would need to be made well in advance of pre-bid meetings, and at the very least, well before the bid or proposal due date.
2. Provide a list of MBE/SLBE firms that were contacted. There also should be a statement regarding what type of contact was made with each firm and why these firms were not suitable to service this project.
3. Provide the list of opportunities the prime contractor (bidder or proposer) had regarding the portion of the project they intended to subcontract out. What areas would be better served by

¹⁶Chapter 6.35.040 (a) WSSC Water Code of Regulations.

an entity that may have specialized services (i.e., trucking, paving, special supplies, electrical engineering, or asbestos abatement)?

4. Submit a copy of the information forwarded to the list of potential subcontracting firms. This step illustrates that adequate information was provided to firms who were contacted.
5. Provide evidence that no bid was rejected without a sound reason. This can be addressed adequately by complying with requirements in items 2 and 3 above.
6. Demonstrate attempts were made to assist interested SLBE firms with obtaining bonding or insurance the bidder/proposer may make as a requirement of the MBE/SLBE firm to subcontract.
7. Demonstrate they (Prime Contractor - Bidder or Proposer) utilized the services of the SLMBE Office¹⁷ and WSSC Water's Supplier Portal System or any successor web-based compliance system to it, or one of the certifying agencies recognized by WSSC Water in establishing the initial contact list. Provide a copy of the information furnished by these agencies and used in contacting bidders.
8. Provide the list of MBE/SLBE firms invited to bid on subcontract work but were not available to work.
9. Provide the list of MBE/SLBE firms invited to bid on subcontract work but did not respond to the Invitation for Bid (IFB).
10. Provide the list of MBE/SLBE firms who submitted bids, which were not the low acceptable bid or fiscally sound according to the bidder, respondent, or prime contractor's contracting policies.
11. Demonstrate the Bidder selected portions of the work that MBE/SLBE firms could perform to increase the likelihood of meeting the subcontracting requirements (including, where applicable, breaking down the contract work into economically feasible units to facilitate subcontractor participation).
12. Provide documentation that MBE/SLBE firms were invited, where appropriate, to meetings/conferences to inform them of subcontracting opportunities.
13. Provide documentation of written notice to a reasonable number of specific MBE/SLBE firms of the bidder's interest in the contract that is being solicited in sufficient time to allow MBE/SLBE firms to participate effectively.¹⁸

Chapter 6.30 provides guidance for narrowly tailored remedies designed to promote greater availability, capacity development, and to remedy discrimination for M/WBEs in WSSC Water contracts. Chapter 6.30 includes several race- and gender-neutral remedies that address MBE inclusion:

- ◆ Access to Capital, Bonding, and Insurance Requirements
- ◆ Outreach
- ◆ Expedited Payment
- ◆ Post Award Contract Compliance Monitoring

¹⁷ The SLMBE Office changed its name to the Office of Supplier Diversity & Inclusion since regulation adoption Chapter 6.30.030(x)

¹⁸ WSSC Water Code of Regulations 6.35.260.

- ◆ Bid Debriefings
- ◆ Monitoring, Tracking, and Reporting of Program and Contracting Activities

According to WSSC Water, race- and gender-neutral efforts have been reasonably effective and successful. Some efforts have been impacted by COVID 19.

In Chapter 6.30, race- and gender-conscious remedies are found in Article III and are designed to address "statistically significant disparities for prime contractors and subcontractors" for all contracting areas.

2.5 Conclusions

WSSC Water's commitment to remedying discrimination is embodied in its MBE and SLBE programs and Code of Regulations. In fact, WSSC Water's MBE and SLBE Programs are a reflection of WSSC Water Leadership's commitment to supplier diversity and the role that supplier diversity can play. In addition to remedying discrimination, fair and equitable procurement and contracting promote economic development and help to ensure that operating departments and units meet the needs of residents in Prince George's and Montgomery Counties. MGT's review found that WSSC Water has detailed policies that govern all aspects of procurement and contracting, which underscore WSSC Water's commitment to equity and inclusion. In addition, MGT's review also found there is recognition that remedying discrimination against small, minority, and women-owned firms is an organization-wide shared responsibility and not solely the responsibility of the Procurement Office and Office of Supplier Diversity & Inclusion.

3. Market Area and Utilization Analysis

3.1 Introduction

This chapter presents the results of MGT Consulting’s (MGT) market area and utilization analyses of firms used on Washington Suburban Sanitary Commission (“WSSC Water”) procurements during July 1, 2014, through June 30, 2019 (FY2015 – FY2019). The specific procurement categories analyzed were Construction, Architecture & Engineering, Professional Services, and Goods & Services.

Chapter Sections	
3.1	Introduction
3.2	Data Collection and Management
3.3	Market Area Analysis
3.4	Utilization Analysis

As the Supreme Court indicated in the *Croson* decision, the findings by Congress of **national** business discrimination in construction and similar industries was not specific enough by itself to support the City of Richmond’s MBE program.¹⁹ As such, the market area is essential to establishing the universe of available vendors and spending that will be considered to identify any disparate treatment of assorted classifications of firms. Utilization data are central to defining this market area. They thus are first presented as a means of identifying the market area for consideration and then are examined within that market area to assess various levels of contracting activity as the first step in the quantitative determination of disparity.

Additionally, as *Croson* prescribed, a disparity study requires the definition of a market area to ensure that a relevant pool of vendors is considered in assessments regarding which firms have been utilized versus which were available.²⁰ If these boundaries are stretched too far, the universe of vendors becomes diluted by firms with no interest or history in working with WSSC Water. Thus, their demographics and experiences have little relevance to actual contracting activity or policy. On the other hand, a boundary set too narrowly risks the opposite circumstance of excluding a high proportion of firms who have contracted with or bid for work with WSSC Water. It thus may also skew the prospective analyses of disparity.

3.2 Data Collection and Management

MGT staff compiled and reconciled electronic data provided by WSSC Water to develop a master set of prime and subcontractor contract data into a Master Utilization Database to support the needs of the Study. MGT utilized WSSC Water’s financial data as the source of prime data and a portion of the subcontractor data, and that was combined with the subcontractor data collected via a survey of the primes. MGT merged the subcontractor data with the prime data to create the Master Utilization Database. To link the subcontractor data to its appropriate prime contract, a standard contract ID across both data sets was used.

MGT began the data collecting process by submitting a detailed data query to WSSC Water. The data query asked for descriptive information regarding prime and subcontractor-level contracting data. Based on the data query, and the subsequent data provided, MGT assessed the prime and subcontractor records

¹⁹ *Richmond v. J. A. Croson Co.*, 488 U.S. 469, 504 (1989).

²⁰ *Id.* at 499-504.

using payments and payment data to determine their usefulness for the Study. During the data collection and management process, MGT decided that although WSSC Water maintains many subcontracting records within its data collection system, it was necessary to conduct a prime survey to ensure the subcontracting data was complete. The prime survey included gathering both M/WBE and non-M/WBE subcontracting data. After creating the master database of prime contracts, MGT identified contracts likely to have subcontracting opportunities. The sample included larger contracts in Construction, Architecture & Engineering, and Professional Services. Goods and Services purchases were not included in the prime survey as they tend not to offer many or substantial subcontracting opportunities. For Goods and Services, WSSC Water's subcontracting data was used. The contracts identified that were likely to have subcontracting scopes became the universe of contracts to collect the subcontract data. MGT created a sample of contracts for which MGT collected subcontractor records; MGT sampled the largest contracts with certainty and randomly sampled the smaller projects. This sample accounted for more than 99% of WSSC Water procurement dollars in each category. MGT provided each prime firm with a letter from WSSC Water, the contract forms to complete, and a list of the contracts needed for more information. MGT contacted the prime firms until the data had been collected or determined with WSSC Water that MGT would not obtain the information from that firm. The final subcontractor data collection accounted for more than 80% of each category's total WSSC Water procurement dollars.

Once MGT completed the data collection process and entered all contract data in a master database, MGT cleaned and prepared the collected data. The data preparation included ensuring consistent firm variables such as name and address, assigning missing race and gender information, assigning missing primary NAICS codes, filling in missing address information, ensuring all paid dollar amounts were accurate (project and prime and subcontracting levels), and identifying significantly incomplete projects. Once this database of collected data was finalized, it was added to the database of contracts that were not included in the sampling universe and proceeded to analysis.

Final data preparation for the master database for analysis consisted of the following:

- ◆ Creating or cleaning variable names and data definitions
- ◆ Updating incorrect or missing addresses, race/gender, and certification information based on all the vendor databases collected. This included:
 - ◆ Anne Arundel County MWBE Vendor List
 - ◆ Baltimore County MWBE Vendor List
 - ◆ Delaware Department of Transportation Disadvantaged Business Enterprise Program Vendor List
 - ◆ Delaware Office of Supplier Diversity Vendor List
 - ◆ Howard County MBE Vendor List
 - ◆ Maryland Department of Transportation Vendor List
 - ◆ Pennsylvania Bureau of Diversity, Inclusion & Small Business Opportunities Vendor List
 - ◆ Prince George's County Supplier Development & Diversity Division Vendor List
 - ◆ Small Business Administration Vendor List

- ◆ WSSC Water Vendor List
- ◆ Assigning commodity codes and types of work descriptions
- ◆ Identifying the location of firms by county and state
- ◆ Ensuring field values are consistent regarding firm name, contact information, race/gender, industry code
- ◆ Removing or reconciling duplicate records
- ◆ Excluding unnecessary records such as payments to other governments, employee reimbursements, utility payments, and other assorted expenditures that are often discovered in contracting and procurement data.
- ◆ Conducting additional research on firms not located within the local area to determine whether there is an office in the local area so that firms in the potential geographic area are accurately recorded. A firm's remittance address, as opposed to the local office, is often presented in the vendor-related data obtained.

Study Period

The preliminary market area analysis is based on contract transactions from July 1, 2014, through June 30, 2019 (FY2015 – FY2019).

Procurement Categories and Exclusions

MGT analyzed the procurement categories by WSSC Water, encompassing four sectors: Construction, Architecture & Engineering, Professional Services, and Goods & Services. These procurement categories are defined as:

- ◆ Construction: Services provided for the construction, renovation, rehabilitation, repair, alteration, improvement, demolition, and excavation of physical structures.
- ◆ Architecture & Engineering: Services related explicitly to preparing plans and specifications for construction projects.
- ◆ Professional Services: Services that require the provider to possess specialized skills, including holding advanced degrees and exercise of independent judgment.
- ◆ Goods & Services: All purchases of physical items, including but not limited to equipment and material; or services that do not typically require a provider to have experience in a specialized field or hold an advanced degree. These purchases exclude land or a permanent interest in land.

The following types of transactions were excluded from the analysis:

- ◆ Transactions associated with non-procurement activities, for example:
- ◆ Administrative items such as utility payments, leases for real estate, or insurance
- ◆ Salary and fringe benefits, training, parking, or conference fees
- ◆ Transactions associated with nonprofit organizations and governmental agencies

3.3 Market Area Analysis

Methodology

In determining a relevant market area, MGT abides by a 75 percent rule of agency spending with deference to historic programmatic considerations to prescribe an appropriate geographic boundary. Although there are no cases directly on point approving of a particular percentage to use, in the Fourth Circuit, the disparity study at issue in *Rowe* applied the same 75 percent rule.²¹ In addition, The National Cooperative Highway Research Program (“NCHRP”) Report recommends this same approach for determining the relevant geographic market area which encompasses at least 75 percent of contract and subcontract dollars being spent by the governmental entity, regardless of the jurisdictional boundaries of the governmental entity.²²

WSSC Water Relevant Market Area	
Anne Arundel County, MD	Washington, DC
Arlington County, VA	Fairfax County, VA
Baltimore County, MD	Fauquier County, VA
Calvert County, MD	Frederick County, MD
Carroll County, MD	Howard County, MD
Charles County, MD	Jefferson County, WV
City of Alexandria, VA	Loudoun County, VA
City of Baltimore, MD	Montgomery County, MD
City of Fairfax, VA	Prince George’s County, MD
City of Falls Church, VA	Prince William County, VA
City of Fredericksburg, VA	Rappahannock County, VA
City of Manassas Park, VA	Spotsylvania County, VA
City of Manassas, VA	Stafford County, VA
Clarke County, VA	Warren County, VA
Culpeper County, VA	

To establish the appropriate geographic boundaries for the Study, the “relevant” market area was isolated according to the 75 percent standard. These market areas are defined by geographic units such as counties and states, based on the following considerations: 1) the courts have accepted the use of standard geographic units in conducting equal employment opportunity and disparity studies; 2) geographic units are externally determined, so there are no subjective determinations, and 3) U.S. Census and other federal agencies routinely collect data by geographic unit. The following presents the methodology used to determine the relevant market area.

Relevant Market Area. Once the overall market area was established, the relevant market area was determined by examining the geographic areas where most of its purchases are procured. Based on the market area analysis results conducted for each business category, the recommended relevant market area are the 29 counties and independent cities within the WSSC Water Market Area (“Market Area”).

The dollars paid were summarized by city or county according to the location of each firm and by the services they provided to WSSC Water: Construction, Architecture & Engineering, Professional Services, and Goods & Services. Corresponding market area analyses showing the dollars paid by city or county within each procurement category are presented in **Appendix B**.

²¹ *H.B. Rowe Co., Inc. v. Tippet*, 615 F.3d 233 (4th Cir. 2010) and 2004 MGT’s North Carolina Department of Transportation Second Generation Disparity Study page 4-10.

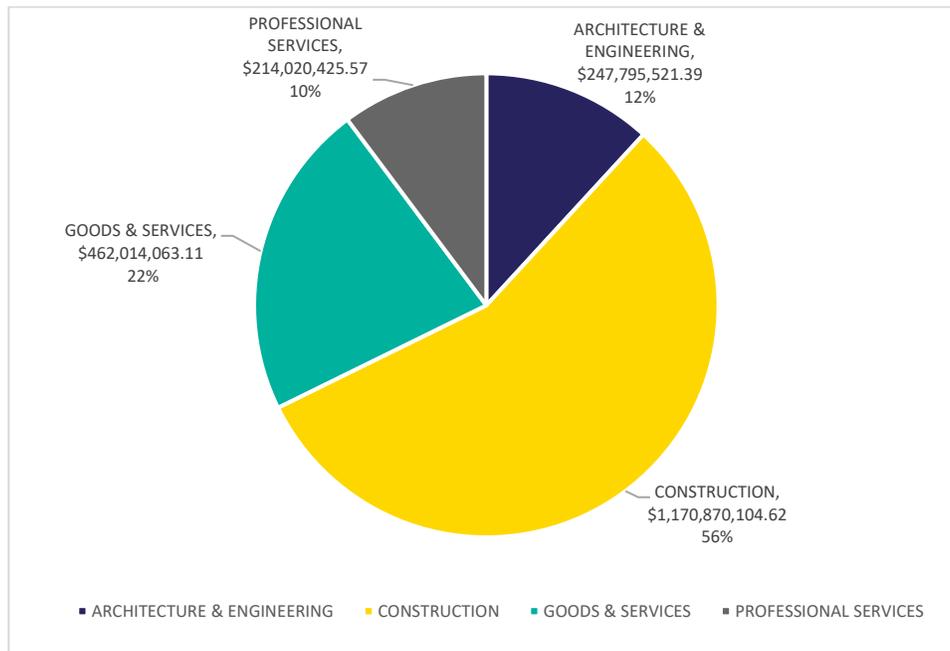
²² Wainwright and Holt (2010), *Guidelines For Conducting A Disparity And Availability Study For The Federal DBE Program* (2010) [“NCHRP Report”], pg. 29 (courts in the 7th, 8th, and 10th Circuits have also upheld programs based on disparity studies using approximately 75 percent as the appropriate standard for geographic market definition). The NCHRP Report presents guidelines to conduct a legally defensible Disparity or Availability study for the DBE program.

Analysis and Identification of Relevant Market Area

An overall market area was first established to account for all relevant WSSC Water payments. More specific regions were analyzed to arrive at a relevant market area to support the Study's goals. This report presents detailed information supporting this market area analysis in **Appendix B** and **Appendix C**.

Figure 3-1 shows that \$2.094 billion were paid to firms within the overall market area between July 1, 2014, and June 30, 2019.

FIGURE 3-1. SUMMARY OF DOLLARS,
TOTAL CONTRACTS (PAID) BY PROCUREMENT CATEGORY,
OVERALL MARKET AREA



Source: MGT developed a Master Prime File based on WSSC Water's data collected between July 1, 2014, through June 30, 2019.

Narrowing the geographic scope, **Table 3-1** shows that firms located within the relevant market area accounted for 78.54 percent of payments across all procurement categories. When broken down by procurement categories, firms located within the relevant market area accounted for:

- ◆ 82.89 percent of the dollars paid in Construction;
- ◆ 95.79 percent of the dollars paid in Architecture & Engineering;
- ◆ 46.54 percent of the dollars paid in Professional Services; and
- ◆ 73.10 percent of the dollars paid in Goods & Services.

**TABLE 3-1. MARKET AREA ANALYSIS,
DISTRIBUTION OF DOLLARS BY BUSINESS CATEGORY,
WSSC WATER MARKET AREA**

CONSTRUCTION	Amount	Percent
<i>Inside MARKET AREA</i>	\$ 970,499,951.98	82.89%
Outside MARKET AREA	\$ 200,370,152.64	17.11%
CONSTRUCTION, TOTAL	\$ 1,170,870,104.62	100.00%
ARCHITECTURE & ENGINEERING	Amount	Percent
<i>Inside MARKET AREA</i>	\$ 237,367,762.43	95.79%
Outside MARKET AREA	\$ 10,427,758.96	4.21%
ARCHITECTURE & ENGINEERING, TOTAL	\$ 247,795,521.39	100.00%
PROFESSIONAL SERVICES	Amount	Percent
<i>Inside MARKET AREA</i>	\$ 99,612,629.65	46.54%
Outside MARKET AREA	\$ 114,407,795.92	53.46%
PROFESSIONAL SERVICES, TOTAL	\$ 214,020,425.57	100.00%
GOODS & SERVICES	Amount	Percent
<i>Inside MARKET AREA</i>	\$ 337,735,826.40	73.10%
Outside MARKET AREA	\$ 124,278,236.71	26.90%
GOODS & SERVICES, TOTAL	\$ 462,014,063.11	100.00%
ALL BUSINESS CATEGORIES	Amount	Percent
<i>Inside MARKET AREA</i>	\$ 1,645,216,170.46	78.54%
Outside MARKET AREA	\$ 449,483,944.23	21.46%
ALL BUSINESS CATEGORIES, TOTAL	\$ 2,094,700,114.69	100.00%

Source: MGT developed a Master Prime File based on WSSC Water’s data collected between July 1, 2014, through June 30, 2019.

Corresponding market area analyses showing the dollars paid by city or county for each procurement category are presented in **Appendix B**.

Analysis and Identification of Product Market

Based on the major categories and description of work on each contract, MGT assigned NAICS codes to each of the payments for both primes and subcontractors. MGT assigned both NAICS code industry groups (4-digit level) and NAICS industries (6-digit level). **Table 3-2** through **Table 3-5** shows the payments and

their associated weights for Construction, Architecture & Engineering, Professional Services, and Goods & Services. **Appendix B** shows the NAICS industries (6-digit level) for the four procurement categories.

Overall, WSSC Water procurements occur in 104 NAICS industry groups. In Construction, WSSC Water procurements occur in 43 NAICS industry groups. In Architecture & Engineering, WSSC Water procurements occur in 15 NAICS industry groups. In Professional Services, WSSC Water procurements occur in 25 NAICS industry groups. In Goods & Services, WSSC Water procurements occur in 79 NAICS industry groups. For NAICS code industries that are shown in **Appendix B**, WSSC Water procurements occurred in 206 industries. In Construction, WSSC Water procurements occur in 76 NAICS industries. In Architecture & Engineering, WSSC Water procurements occur in 25 NAICS industries. In Professional Services, WSSC Water procurements occur in 49 NAICS industries. In Goods & Services, WSSC Water procurements occur in 135 NAICS industries.

Table 3-2 shows that for Construction, over 85 percent of the payments are distributed among only four industry groups (2371, 2381, 2382, and 5413), with most of the payments occurring in one industry group (2371).

TABLE 3-2. PRODUCT MARKET,
DISTRIBUTION OF DOLLARS BY NAICS CODE,
CONSTRUCTION

NAICS INDUSTRY GROUP	NAICS DESCRIPTION	AMOUNT	NAICS WEIGHT
2371	Utility system construction	\$688,672,904.35	58.82%
2381	Building foundation and exterior contractors	\$192,767,245.79	16.46%
2382	Building equipment contractors	\$89,458,638.07	7.64%
5413	Architectural and engineering services	\$38,074,098.22	3.25%
2389	Other specialty trade contractors	\$38,025,693.34	3.25%
4842	Specialized freight trucking	\$27,952,880.26	2.39%
4233	Lumber and const. supply merchant wholesalers	\$22,441,665.97	1.92%
2373	Highway, street, and bridge construction	\$13,519,205.85	1.15%
2383	Building finishing contractors	\$11,996,584.50	1.02%
5324	Machinery and equipment rental and leasing	\$7,337,738.74	0.63%
2362	Nonresidential building construction	\$6,999,784.71	0.60%
4237	Hardware and plumbing merchant wholesalers	\$4,922,947.46	0.42%
5621	Waste collection	\$4,412,279.85	0.38%
2379	Other heavy construction	\$3,748,366.38	0.32%
3329	Other fabricated metal product manufacturing	\$2,930,754.00	0.25%
5617	Services to buildings and dwellings	\$2,700,444.96	0.23%
4236	Appliance and electric goods merchant whls.	\$2,489,537.56	0.21%
5629	Remediation and other waste services	\$2,340,604.47	0.20%
5619	Other support services	\$1,907,092.30	0.16%
4238	Machinery and supply merchant wholesalers	\$1,802,855.95	0.15%

NAICS INDUSTRY GROUP	NAICS DESCRIPTION	AMOUNT	NAICS WEIGHT
5622	Waste treatment and disposal	\$1,417,390.69	0.12%
3241	Petroleum and coal products manufacturing	\$1,323,973.58	0.11%
4543	Direct selling establishments	\$959,268.90	0.08%
4249	Misc. nondurable goods merchant wholesalers	\$661,766.94	0.06%
3312	Steel product mfg. from purchased steel	\$459,820.61	0.04%
5415	Computer systems design and related services	\$374,133.25	0.03%
3273	Cement and concrete product manufacturing	\$203,120.57	0.02%
4421	Furniture stores	\$160,943.00	0.01%
3372	Office furniture and fixtures manufacturing	\$159,633.00	0.01%
5242	Insurance agencies and brokerages	\$156,425.00	0.01%
5613	Employment services	\$141,170.52	0.01%
5416	Management and technical consulting services	\$95,460.60	0.01%
5419	Other professional and technical services	\$93,454.03	0.01%
5616	Investigation and security services	\$52,800.00	0.00% ²³
4442	Lawn and garden equipment and supplies stores	\$30,825.40	0.00%
3219	Other wood product manufacturing	\$28,762.00	0.00%
3272	Glass and glass product manufacturing	\$16,440.00	0.00%
5414	Specialized design services	\$12,850.00	0.00%
3399	Other miscellaneous manufacturing	\$9,509.80	0.00%
3323	Architectural and structural metals mfg.	\$4,015.00	0.00%
3379	Other furniture related product manufacturing	\$2,850.00	0.00%
4441	Building material and supplies dealers	\$2,507.00	0.00%
4234	Commercial equip. merchant wholesalers	\$1,662.00	0.00%
	TOTAL	\$1,170,870,104.62	

²³ Here, and thereafter, 0.00% doesn't indicate that no spend was associated with this NAICS code. Rather, 0.00% indicates that, based on rounding, the amount was smaller than 0.01%.

For Architecture & Engineering, **Table 3-3** shows that nearly all of the payments occurred in one industry group (5413).

TABLE 3-3. PRODUCT MARKET,
DISTRIBUTION OF DOLLARS BY NAICS CODE,
ARCHITECTURE & ENGINEERING

NAICS INDUSTRY GROUP	NAICS DESCRIPTION	AMOUNT	NAICS WEIGHT
5413	Architectural and engineering services	\$237,649,169.90	95.91%
5613	Employment services	\$3,604,001.84	1.45%
5416	Management and technical consulting services	\$2,350,537.13	0.95%
2371	Utility system construction	\$1,436,302.39	0.58%
5415	Computer systems design and related services	\$651,683.29	0.26%
5629	Remediation and other waste services	\$574,915.69	0.23%
5619	Other support services	\$444,300.96	0.18%
2379	Other heavy construction	\$311,997.62	0.13%
2381	Building foundation and exterior contractors	\$282,090.23	0.11%
5418	Advertising, PR, and related services	\$215,947.65	0.09%
5621	Waste collection	\$85,732.92	0.03%
5324	Machinery and equipment rental and leasing	\$76,340.00	0.03%
5622	Waste treatment and disposal	\$44,609.26	0.02%
4233	Lumber and const. supply merchant wholesalers	\$39,972.93	0.02%
4236	Appliance and electric goods merchant whls.	\$27,919.58	0.01%
	TOTAL	\$247,795,521.39	

Table 3-4 shows that for Professional Services, over 90 percent of the payments are distributed among only four industry groups (5415, 5416, 5413, and 5324), with a majority of the payments occurring in one industry group (5415).

TABLE 3-4. PRODUCT MARKET,
DISTRIBUTION OF DOLLARS BY NAICS CODE,
PROFESSIONAL SERVICES

NAICS INDUSTRY GROUP	NAICS DESCRIPTION	AMOUNT	NAICS WEIGHT
5415	Computer systems design and related services	\$135,192,007.99	63.17%
5416	Management and technical consulting services	\$46,024,498.03	21.50%
5413	Architectural and engineering services	\$11,319,155.10	5.29%
5324	Machinery and equipment rental and leasing	\$5,084,993.39	2.38%
5411	Legal services	\$4,973,012.04	2.32%
5419	Other professional and technical services	\$4,710,319.07	2.20%
5418	Advertising, PR, and related services	\$1,470,279.54	0.69%
6114	Business, computer and management training	\$1,377,370.73	0.64%
5241	Insurance carriers	\$1,046,746.00	0.49%
5412	Accounting and bookkeeping services	\$767,062.80	0.36%
5242	Insurance agencies and brokerages	\$462,729.76	0.22%
5239	Other financial investment activities	\$431,835.98	0.20%
5414	Specialized design services	\$281,710.96	0.13%
6115	Technical and trade schools	\$271,562.70	0.13%
2371	Utility system construction	\$220,040.50	0.10%
6116	Other schools and instruction	\$77,950.03	0.04%
5619	Other support services	\$77,515.00	0.04%
2389	Other specialty trade contractors	\$61,258.40	0.03%
4233	Lumber and const. supply merchant wholesalers	\$59,911.72	0.03%
5617	Services to buildings and dwellings	\$51,192.30	0.02%
5614	Business support services	\$21,152.00	0.01%
5613	Employment services	\$15,988.04	0.01%
6117	Educational support services	\$10,462.00	0.00%
6213	Offices of other health practitioners	\$10,171.49	0.00%
6211	Offices of physicians	\$1,500.00	0.00%
	TOTAL	\$214,020,425.57	

For Goods & Services, **Table 3-5** shows the payments are distributed more evenly across all of the industry groups. With that said, five industry groups account for over 50 percent of the payments (3329, 4238, 5622, 5613, and 4246).

TABLE 3-5. PRODUCT MARKET,
DISTRIBUTION OF DOLLARS BY NAICS CODE,
GOODS & SERVICES

NAICS INDUSTRY GROUP	NAICS DESCRIPTION	AMOUNT	NAICS WEIGHT
3329	Other fabricated metal product manufacturing	\$67,217,916.37	14.55%
4238	Machinery and supply merchant wholesalers	\$57,653,898.39	12.48%
5622	Waste treatment and disposal	\$52,968,121.36	11.46%
5613	Employment services	\$40,198,387.85	8.70%
4246	Chemical merchant wholesalers	\$39,147,395.43	8.47%
5617	Services to buildings and dwellings	\$27,628,443.62	5.98%
4234	Commercial equip. merchant wholesalers	\$17,701,494.39	3.83%
4842	Specialized freight trucking	\$14,975,200.63	3.24%
4237	Hardware and plumbing merchant wholesalers	\$13,705,046.02	2.97%
3345	Electronic instrument manufacturing	\$12,275,880.17	2.66%
5616	Investigation and security services	\$12,069,739.08	2.61%
5629	Remediation and other waste services	\$11,227,014.28	2.43%
8113	Commercial machinery repair and maintenance	\$9,617,576.49	2.08%
4236	Appliance and electric goods merchant whls.	\$8,371,976.37	1.81%
4233	Lumber and const. supply merchant wholesalers	\$7,877,895.01	1.71%
4543	Direct selling establishments	\$7,764,309.60	1.68%
4411	Automobile dealers	\$7,550,920.29	1.63%
5614	Business support services	\$5,579,438.99	1.21%
5415	Computer systems design and related services	\$3,908,200.39	0.85%
3241	Petroleum and coal products manufacturing	\$3,742,310.68	0.81%
5182	Data processing, hosting, and related services	\$3,622,210.96	0.78%
3253	Agricultural chemical manufacturing	\$3,471,611.04	0.75%
8112	Electronic equipment repair and maintenance	\$3,332,294.37	0.72%
5413	Architectural and engineering services	\$3,126,513.08	0.68%
5112	Software publishers	\$2,839,204.80	0.61%
4413	Auto parts, accessories, and tire stores	\$2,558,392.17	0.55%
2371	Utility system construction	\$2,272,136.99	0.49%
8123	Dry cleaning and laundry services	\$2,233,928.20	0.48%
4421	Furniture stores	\$2,150,032.20	0.47%
4241	Paper and paper product merchant wholesalers	\$2,113,906.48	0.46%
8111	Automotive repair and maintenance	\$1,965,936.93	0.43%

NAICS INDUSTRY GROUP	NAICS DESCRIPTION	AMOUNT	NAICS WEIGHT
3273	Cement and concrete product manufacturing	\$1,682,335.70	0.36%
5619	Other support services	\$1,443,523.41	0.31%
4884	Support activities for road transportation	\$953,689.71	0.21%
5621	Waste collection	\$947,010.02	0.20%
4931	Warehousing and storage	\$767,997.81	0.17%
3362	Motor vehicle body and trailer manufacturing	\$476,638.15	0.10%
2389	Other specialty trade contractors	\$414,142.57	0.09%
3339	Other general-purpose machinery manufacturing	\$364,456.85	0.08%
2213	Water, sewage and other systems	\$361,120.00	0.08%
5121	Motion picture and video industries	\$329,032.33	0.07%
3343	Audio and video equipment manufacturing	\$245,405.91	0.05%
4412	Other motor vehicle dealers	\$217,998.00	0.05%
3327	Machine shops and threaded product mfg.	\$206,566.00	0.04%
2362	Nonresidential building construction	\$205,664.28	0.04%
3251	Basic chemical manufacturing	\$203,011.73	0.04%
3231	Printing and related support activities	\$192,923.04	0.04%
3399	Other miscellaneous manufacturing	\$177,512.66	0.04%
4239	Misc. durable goods merchant wholesalers	\$167,484.93	0.04%
3359	Other electrical equipment and component mfg.	\$150,776.82	0.03%
4243	Apparel and piece goods merchant wholesalers	\$149,191.22	0.03%
2379	Other heavy construction	\$148,875.00	0.03%
5416	Management and technical consulting services	\$142,145.63	0.03%
3259	Other chemical product and preparation mfg.	\$137,774.14	0.03%
3342	Communications equipment manufacturing	\$125,216.81	0.03%
4231	Motor vehicle and parts merchant wholesalers	\$120,252.26	0.03%
3341	Computer and peripheral equipment mfg.	\$110,631.11	0.02%
2382	Building equipment contractors	\$98,192.51	0.02%
4911	Postal service	\$93,631.42	0.02%
3332	Industrial machinery manufacturing	\$79,326.00	0.02%
8114	Household goods repair and maintenance	\$56,215.53	0.01%
3333	Commercial and service industry machinery	\$51,820.00	0.01%
7223	Special food services	\$44,287.00	0.01%
4921	Couriers and express delivery services	\$41,345.89	0.01%
2383	Building finishing contractors	\$40,400.00	0.01%
4889	Other support activities for transportation	\$36,771.29	0.01%
1151	Support activities for crop production	\$21,086.00	0.00%
1125	Aquaculture	\$18,500.00	0.00%

NAICS INDUSTRY GROUP	NAICS DESCRIPTION	AMOUNT	NAICS WEIGHT
3252	Resin, rubber, and artificial fibers mfg.	\$17,598.00	0.00%
4235	Metal and mineral merchant wholesalers	\$17,301.63	0.00%
3331	Ag., construction, and mining machinery mfg.	\$17,015.90	0.00%
4855	Charter bus industry	\$15,238.95	0.00%
5191	Other information services	\$13,800.00	0.00%
4249	Misc. nondurable goods merchant wholesalers	\$10,662.00	0.00%
3221	Pulp, paper, and paperboard mills	\$10,390.00	0.00%
3315	Foundries	\$8,010.00	0.00%
7115	Independent artists, writers, and performers	\$6,100.00	0.00%
3334	HVAC and commercial refrigeration equipment	\$5,214.27	0.00%
3353	Electrical equipment manufacturing	\$2,448.00	0.00%
	TOTAL	\$462,014,063.11	

Market Area Conclusions

Based on the 75 percent rule discussed earlier, the 29-County and Independent City Market Area represents a majority of WSSC Water’s procurement activity, with 78.54 percent of the payments to vendors within this market area. All the categories, except for Professional Services, represent a majority of WSSC Water’s procurement activity within the corresponding categories. Architecture & Engineering has the highest spend in the market area with 95.79 percent of payments; and Professional Services with the smallest at 46.54 percent. The definition of the relevant market area allows for detailed examinations of contracting activity with local vendors.

The product market shows that for WSSC Water, there are a number of industry groups that make up all payments across the four procurement categories. Although these payments occur in 104 industry groups (4-digit level), about ten industry groups make up a majority of all payments. The associated weights seen in the tables will be used to calculate estimates in the availability analysis. Similarly, to NAICS industry groups, 15 NAICS industries (6-digit level) make up the majority of all payments.

3.4 Utilization Analysis

The utilization analysis presents a summary of payments within the scope of the Study and an initial assessment of the effectiveness of initiatives in promoting the inclusion of M/WBEs in WSSC Water’s contracting and procurement activities.

The utilization analysis is based on payments made to both primes and subcontractors. Analysis of the payment data is broken down by the procurement categories of Construction, Architecture & Engineering, Professional Services, and Goods & Services and encompasses payments between July 1, 2014, through June 30, 2019.

Classification of Firms

According to the definitions provided below, firms included in the utilization analysis have been assigned to business owner classifications.²⁴

- ◆ **M/WBE Firms.** In this study, businesses classified as minority- and women-owned firms (M/WBE) are at least 51 percent owned and controlled by members of one of five groups: African Americans, Asian Americans, Hispanic Americans, Native Americans, or nonminority women. These groups were defined according to the United States (U.S.) Census Bureau as follows:
 - **African Americans:** U.S. citizens or lawfully admitted permanent residents having an origin in any of the black racial groups of Africa.
 - **Asian Americans:** U.S. citizens or lawfully admitted permanent residents from the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands.
 - **Hispanic Americans:** U.S. citizens or lawfully admitted permanent residents of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish or Portuguese cultures or origins regardless of race.
 - **Native Americans:** U.S. citizens or lawfully admitted permanent residents who originate from North America's original peoples and maintain cultural identification through tribal affiliation or community recognition.
 - **Nonminority Females:** U.S. citizens or lawfully admitted permanent residents of non-Hispanic white females. Minority females were included in their respective minority categories.
 - Minority female- and male-owned firms were classified and assigned to their corresponding minority groups. For example, a Hispanic American female- or Hispanic American male-owned firm was assigned to the Hispanic American-owned firm minority group.
- ◆ **Non-M/WBE Firms.** Firms identified as nonminority male or majority-owned were classified as non-M/WBE firms. After a thorough review of available vendor databases containing race, ethnicity, and gender information, if there was no indication of business ownership, these firms were also classified as non-M/WBE firms.

Overall Utilization

Table 3-6 shows the M/WBE utilization amounted to 33.20 percent of total payments. Corresponding detailed analyses showing the utilization of firms by business ownership classification are presented in **Appendix C**.

²⁴ Business ownership classification was based on the race, ethnicity, and gender classification of the owner during the study period.

TABLE 3-6. UTILIZATION ANALYSIS BY BUSINESS OWNERSHIP CLASSIFICATION,
ALL PROCUREMENT CATEGORIES

BUSINESS OWNERSHIP CLASSIFICATION	ALL PROCUREMENT CATEGORIES	
	Dollars (\$)	Percent (%)
African Americans	\$186,114,375.02	8.89%
Asian American	\$152,173,372.36	7.26%
Hispanic Americans	\$171,318,721.88	8.18%
Native Americans	\$1,035,291.62	0.05%
Total MBE Firms	\$510,641,760.88	24.38%
Nonminority Females	\$184,855,431.93	8.82%
Total M/WBE Firms	\$695,497,192.81	33.20%
Non-M/WBE Firms	\$1,399,202,921.88	66.80%
TOTAL	\$2,094,700,114.69	100.00%

Source: MGT developed a Master Prime File based on WSSC Water's data collected between July 1, 2014, through June 30, 2019.

Utilization by Procurement Category

The next series of tables shows the summary results of MGT's utilization analysis of each procurement category. Corresponding detailed analyses showing the utilization of firms by business ownership classification for each procurement category are presented in **Appendix C**.

Beginning with an examination of **Construction**, **Table 3-7** shows the utilization of M/WBE firms was 35.68 percent. Hispanic American firms represent the largest MBE classification with 12.12 percent. Comparing M/WBEs together, Hispanic Americans and Nonminority female firms are the two largest classifications. Otherwise, utilization for specific classifications was:

- ◆ 5.09 percent for African American firms;
- ◆ 7.06 percent for Asian American firms;
- ◆ 12.12 percent for Hispanic American firms;
- ◆ 0.09 percent for Native American firms;
- ◆ 24.36 percent for MBE firms;
- ◆ 11.32 percent for Nonminority female firms; and
- ◆ 64.32 percent for Non-M/WBE firms.

TABLE 3-7. UTILIZATION ANALYSIS BY BUSINESS OWNERSHIP CLASSIFICATION,
CONSTRUCTION

BUSINESS OWNERSHIP CLASSIFICATION	CONSTRUCTION	
	Dollars (\$)	Percent (%)
African Americans	\$59,608,032.37	5.09%
Asian American	\$82,671,083.79	7.06%
Hispanic Americans	\$141,938,432.17	12.12%
Native Americans	\$1,035,291.62	0.09%
Total MBE Firms	\$285,252,839.95	24.36%
Nonminority Females	\$132,523,411.82	11.32%
Total M/WBE Firms	\$417,776,251.77	35.68%
Non-M/WBE Firms	\$753,093,852.85	64.32%
TOTAL	\$1,170,870,104.62	100.00%

Source: MGT developed a Master Prime File based on WSSC Water's data collected between July 1, 2014, through June 30, 2019.

Table 3-8 shows the utilization of M/WBE firms was 29.97 percent in **Architecture & Engineering**. Asian American and African American firms represent the two largest categories across all M/WBEs with 14.77 percent and 7.98 percent, respectively. Utilization for specific classifications was:

- ◆ 7.98 percent for African American firms;
- ◆ 14.77 percent for Asian American firms;
- ◆ 4.22 percent for Hispanic American firms;
- ◆ 0.00 percent for Native American firms;
- ◆ 26.97 percent for MBE firms;
- ◆ 3.00 percent for Nonminority female firms; and
- ◆ 70.03 percent for Non-M/WBE firms.

TABLE 3-8. UTILIZATION ANALYSIS BY BUSINESS OWNERSHIP CLASSIFICATION,
ARCHITECTURE & ENGINEERING

BUSINESS OWNERSHIP CLASSIFICATION	ARCHITECTURE & ENGINEERING	
	Dollars (\$)	Percent (%)
African Americans	\$19,762,135.64	7.98%
Asian American	\$36,592,200.17	14.77%
Hispanic Americans	\$10,468,364.83	4.22%
Native Americans	\$0.00	0.00%
Total MBE Firms	\$66,822,700.64	26.97%
Nonminority Females	\$7,429,400.40	3.00%
Total M/WBE Firms	\$74,252,101.04	29.97%
Non-M/WBE Firms	\$173,543,420.35	70.03%
TOTAL	\$247,795,521.39	100.00%

Source: MGT developed a Master Prime File based on WSSC Water's data collected between July 1, 2014, through June 30, 2019.

Table 3-9 shows the utilization of M/WBE firms was 17.62 percent in **Professional Services**. As in Architecture & Engineering, African American and Asian American firms represent the two largest categories across all M/WBEs with 6.78 percent and 6.54 percent, respectively. Individually, the M/WBE utilization was:

- ◆ 6.78 percent for African American firms;
- ◆ 6.54 percent for Asian American firms;
- ◆ 0.57 percent for Hispanic American firms;
- ◆ 0.00 percent for Native American firms;
- ◆ 13.89 percent for MBE firms;
- ◆ 3.73 percent for Nonminority female firms; and
- ◆ 82.38 percent for Non-M/WBE firms.

TABLE 3-9. UTILIZATION ANALYSIS BY BUSINESS OWNERSHIP CLASSIFICATION, PROFESSIONAL SERVICES

BUSINESS OWNERSHIP CLASSIFICATION	PROFESSIONAL SERVICES	
	Dollars (\$)	Percent (%)
African Americans	\$14,500,476.19	6.78%
Asian American	\$13,997,684.86	6.54%
Hispanic Americans	\$1,226,732.75	0.57%
Native Americans	\$0.00	0.00%
Total MBE Firms	\$29,724,893.80	13.89%
Nonminority Females	\$7,987,604.94	3.73%
Total M/WBE Firms	\$37,712,498.74	17.62%
Non-M/WBE Firms	\$176,307,926.83	82.38%
TOTAL	\$214,020,425.57	100.00%

Source: MGT developed a Master Prime File based on WSSC Water's data collected between July 1, 2014, through June 30, 2019.

Table 3-10 shows the utilization of M/WBE firms was 35.88 percent in **Goods & Services**. African American firms represent the largest MBE classification with 19.97 percent. Comparing M/WBEs together, African Americans and Nonminority female firms are the two largest classifications. Individually, the M/WBE utilization was:

- ◆ 19.97 percent for African American firms;
- ◆ 4.09 percent for Asian American firms;
- ◆ 3.83 percent for Hispanic American firms;
- ◆ 0.00 percent for Native American firms;
- ◆ 27.89 percent for MBE firms;
- ◆ 7.99 percent for Nonminority female firms; and
- ◆ 64.12 percent for Non-M/WBE firms.

TABLE 3-10. UTILIZATION ANALYSIS BY BUSINESS OWNERSHIP CLASSIFICATION, GOODS & SERVICES

BUSINESS OWNERSHIP CLASSIFICATION	GOODS & SERVICES	
	Dollars (\$)	Percent (%)
African Americans	\$92,243,730.82	19.97%
Asian American	\$18,912,403.54	4.09%
Hispanic Americans	\$17,685,192.13	3.83%
Native Americans	\$0.00	0.00%
Total MBE Firms	\$128,841,326.49	27.89%
Nonminority Females	\$36,915,014.77	7.99%
Total M/WBE Firms	\$165,756,341.26	35.88%
Non-M/WBE Firms	\$296,257,721.85	64.12%
TOTAL	\$462,014,063.11	100.00%

Source: MGT developed a Master Prime File based on WSSC Water's data collected between July 1, 2014, through June 30, 2019.

Utilization Conclusions

The utilization analysis shows that M/WBE firms are utilized at lower rates than their non-M/WBE counterparts. Overall, 33.20 percent of the WSSC Water's payments went to M/WBE firms, while 66.80 percent went to non-M/WBE firms. While M/WBE utilization is low throughout the views on utilization that have been presented in this chapter, understanding the proportion of firms willing and able to provide services to WSSC Water is critical in any determination of disparity. Availability and resulting disparity ratios are presented in **Chapter 4**, which follows, to provide more definitive conclusions in this respect.

4. Availability and Disparity Analyses

4.1 Introduction

This chapter presents the results of MGT’s analyses regarding **availability** and **disparity**. Availability measures the numbers and proportions of vendors willing and able to work with an agency. At the same time, the disparity is an observed statistically significant difference between the utilization of minority- and female-owned firms (as discussed in **Chapter 3**) relative to their respective availability. Consistent with previous chapters, this analysis focuses on procurements in the categories of Construction, Architecture & Engineering, Professional Services, and Goods & Services sectors between July 1, 2014, through June 30, 2019 (FY2015 – FY2019).

Chapter Sections	
4.1	Introduction
4.2	Availability Estimations
4.3	Disparity Analyses and Significance Testing
4.4	Conclusions

4.2 Availability Estimations

The sections that follow are descriptions of the approach and methodology used by MGT to estimate availability, followed by the data collection and estimation process results.

4.2.1 Availability Methodology

Justice O’Connor in *Croson* wrote,

“Where there is a significant statistical disparity between the number of qualified minority contractors willing and able to perform a particular service and the number of such contractors actually engaged by the locality or the locality’s prime contractors, an inference of discriminatory exclusion could arise.”²⁵

Courts define availability as to whether a firm is **willing and able** to work with the agency in question as a method of constructing the universe of firms that might be considered in that agency’s procurement activities.

- ◆ **Willing** is reasonably presumed via the vendors’ active pursuit of registration to work with any public (government) agency or a registration in Dun & Bradstreet with a NAICS code utilized by the public sector entity.
- ◆ **Able**, or capability to perform work (capacity), is more loosely defined due to two obscuring factors: (1) the scalable nature of firms that may reasonably add capacity to handle jobs beyond previous performance, and (2) the inherent concern that discrimination may have influenced the historic or existing scale of operation of the firms within the market.

²⁵ *Richmond v. J. A. Croson Co.*, 488 U.S. 469, 509 (1989).

In disparity studies, terms such as capacity or ability are not well defined statistically. The question always remains, “what qualifies a vendor to have the capacity to do work for a public entity?” Is a firm qualified based on its annual firm revenues, employment size, bonding limits, or the number of contracts bid or awarded? Does capable or able mean that they possess some sort of business license, certain years of training, specific work experience, or the number of contracts they can perform at a given time? Further, what combination of these business attributes accurately reflects capacity? From where would a researcher even reliably gather this data? For argument’s sake, even if the researcher can overcome these statistical limitations, there remains the issue of these factors being influenced by discrimination towards M/WBE firms. The entire reason for having a supplier diversity program is to remedy past or current discrimination in the relevant business market. A statistical method for estimating availability should not improperly limit the availability measure by incorporating factors that are themselves impacted by discrimination, such as firm age, annual individual firm revenues, bonding limits, or the number of employees. Limiting the availability pool by factors that are themselves influenced by discrimination risks negating the remedial nature of any program based on the data.

Thus, this study appropriately measures the "ability/capacity" by analyzing industry affiliation (NAICS code), geographic location, and labor market experience (utilization weights).

With this in mind, a reliable estimation of the number of firms *willing* and *able* to provide each of the respective services under the examination scope is a significant element in determining disparity. Post-*Croscon* case law has not prescribed a single approach to deriving vendor availability, and agencies have used various means to estimate pools of available vendors.

Among the array of methods utilized, what is known as a “custom census” is currently the most accurate apples-to-apples approach to determine availability and has been favorably reviewed by the courts that have examined it.²⁶ It provides the most consistent and rigorous apples-to-apples comparison between establishments in the availability numerator and those in the denominator; it adheres with the remedial nature of most M/WBE policies by measuring overall M/WBE availability in the relevant market area as opposed to only those businesses currently certified by an agency; and, as discussed above, is less likely to be tainted by the effects of past and present discrimination than other methods. The steps used to calculate availability are as follows:

1. Create a database of WSSC Water contracts to identify utilization.
2. Identify the relevant geographic market based on the utilization data.
3. Identify the relevant product markets based on the utilization data.
4. Count all businesses in those relevant markets.
5. Identify listed minority- and female-owned businesses in those markets.
6. Verify the ownership status of listed minority- and female-owned businesses (misclassification).
7. Verify the ownership status of all other firms (non-classification).

²⁶ *Sherbrooke Turf, Inc. v. Minnesota Department of Transportation*, 345 F.3d 964 (8th Cir. 2003), *cert. denied*, 541 U.S. 1041 (2004); *Northern Contracting, Inc. v. Illinois Department of Transportation*, 473 F.3d 715 (7th Cir. 2007); *Builders Ass’n of Greater Chicago v. City of Chicago*, 298 F.Supp. 2d 725 (N.D. Ill. 2003); *Midwest Fence Corp. v. United States Department of Transportation, et al.*, 84 F.Supp. 3d 705 (N.D. Ill. 2015), *aff’d*, 2016 U.S App. LEXIS 19959 (7th. Cir. November 4, 2016).

MGT's data assessment and evaluation of alternative methods for measuring the numbers of firms of the types and classifications available to work with WSSC Water confirmed that a version of a custom census of firms in the relevant market area would provide the most accurate representation of available firms. The custom census approach used by MGT in this instance required the development of representative samples of firms within each of the four procurement categories identified for the study, each of which had to cover the defined 29-county geographic boundaries of the relevant market area.

First, an intensive examination of WSSC Water's procurements was required to define the appropriate characteristics of the universe of prospective vendors regarding the types of goods and services offered. WSSC Water procurements were assigned North American Industry Classification System (NAICS) codes that Dun & Bradstreet uses to classify firms' primary lines of business. These industry selections were then used to establish weighting criteria in random samples of vendors to be surveyed. Target response thresholds were selected for each industry and NAICS code subsector to ensure a 95 percent confidence interval and +/-5 percent margin of error for findings. Second, a survey was designed and administered to sampled firms by telephone and email to verify the ownership status of listed minority- and female-owned businesses (misclassification) or verify the ownership status of all other firms (non-classification).

The survey results were then extrapolated to the full scale of the applicable universe to estimate available firms by ethnicity/gender classification and procurement category.

4.2.2 Availability Analysis

Following the methodology prescribed in the previous section, MGT derived estimates for proportions of available firms for the racial, ethnic, and gender ownership classes and four defined procurement categories. Corresponding detailed analyses showing the availability of firms by race, ethnicity, and gender are presented in **Appendix D. 12.39 percent** are African American firms;

- ◆ 8.73 percent are Asian American firms;
- ◆ 9.88 percent are Hispanic American firms;
- ◆ 0.48 percent are Native American firms;
- ◆ 31.48 percent are MBE firms;
- ◆ 15.58 percent are Nonminority female firms; and
- ◆ 52.95 percent are Non-M/WBE firms.

TABLE 4-1 presents availability estimates spanning all procurement categories in aggregate. We observe that:

- ◆ 12.39 percent are African American firms;
- ◆ 8.73 percent are Asian American firms;
- ◆ 9.88 percent are Hispanic American firms;
- ◆ 0.48 percent are Native American firms;
- ◆ 31.48 percent are MBE firms;
- ◆ 15.58 percent are Nonminority female firms; and

- ◆ 52.95 percent are Non-M/WBE firms.

TABLE 4-1.
ESTIMATION OF AVAILABLE FIRMS, **ALL PROCUREMENT CATEGORIES**

BUSINESS OWNERSHIP CLASSIFICATION	% OF AVAILABLE FIRMS
African Americans	12.39%
Asian Americans	8.73%
Hispanic Americans	9.88%
Native Americans	0.48%
Total MBE Firms	31.48%
Nonminority Females	15.58%
Total M/WBE Firms	47.05%
Non-M/WBE Firms	52.95%
TOTAL	100.00%

Source: Custom Census Analysis. Due to rounding, it may not add up to 100%
Study Period: July 1, 2014, through June 30, 2019 (FY2015 – FY2019).

In the **Construction** category, we observe the following availability proportions (**Table 4-2**):

- ◆ 9.77 percent are African American firms;
- ◆ 7.22 percent are Asian American firms;
- ◆ 13.19 percent are Hispanic American firms;
- ◆ 0.29 percent are Native American firms;
- ◆ 30.47 percent are MBE firms;
- ◆ 14.56 percent are Nonminority female firms; and
- ◆ 54.97 percent are Non-M/WBE firms.

TABLE 4-2.
ESTIMATION OF AVAILABLE FIRMS, **CONSTRUCTION**

BUSINESS OWNERSHIP CLASSIFICATION	% OF AVAILABLE FIRMS
African Americans	9.77%
Asian Americans	7.22%
Hispanic Americans	13.19%
Native Americans	0.29%
Total MBE Firms	30.47%
Nonminority Females	14.56%
Total M/WBE Firms	45.03%
Non-M/WBE Firms	54.97%
TOTAL	100.00%

Source: Custom Census Analysis. Due to rounding, it may not add up to 100%
Study Period: July 1, 2014, through June 30, 2019 (FY2015 – FY2019).

Within the **Architecture & Engineering** category (**Table 4-3**), availability estimates are as follows:

- ◆ 14.42 percent are African American firms;
- ◆ 18.31 percent are Asian American firms;
- ◆ 7.38 percent are Hispanic American firms;
- ◆ 0.68 percent are Native American firms;
- ◆ 40.78 percent are MBE firms;
- ◆ 14.78 percent are Nonminority female firms; and
- ◆ 44.44 percent are Non-M/WBE firms.

TABLE 4-3.
ESTIMATION OF AVAILABLE FIRMS, ARCHITECTURE & ENGINEERING

BUSINESS OWNERSHIP CLASSIFICATION	% OF AVAILABLE FIRMS
African Americans	14.42%
Asian Americans	18.31%
Hispanic Americans	7.38%
Native Americans	0.68%
Total MBE Firms	40.78%
Nonminority Females	14.78%
Total M/WBE Firms	55.56%
Non-M/WBE Firms	44.44%
TOTAL	100.00%

Source: Custom Census Analysis. Due to rounding, it may not add up to 100%
Study Period: July 1, 2014, through June 30, 2019 (FY2015 – FY2019).

In **Professional Services** (**Table 4-4**), availability estimates were as follows:

- ◆ 17.21 percent are African American firms;
- ◆ 11.62 percent are Asian American firms;
- ◆ 4.44 percent are Hispanic American firms;
- ◆ 0.43 percent are Native American firms;
- ◆ 33.71 percent are MBE firms;
- ◆ 13.05 percent are Nonminority female firms; and
- ◆ 53.25 percent are Non-M/WBE firms.

TABLE 4-4.
ESTIMATION OF AVAILABLE FIRMS, **PROFESSIONAL SERVICES**

BUSINESS OWNERSHIP CLASSIFICATION	% OF AVAILABLE FIRMS
African Americans	17.21%
Asian Americans	11.62%
Hispanic Americans	4.44%
Native Americans	0.43%
Total MBE Firms	33.71%
Nonminority Females	13.05%
Total M/WBE Firms	46.75%
Non-M/WBE Firms	53.25%
TOTAL	100.00%

Source: Custom Census Analysis. Due to rounding, it may not add up to 100%
Study Period: July 1, 2014, through June 30, 2019 (FY2015 – FY2019).

Finally, in the **Goods & Services (Table 4-5)** availability estimates consisted of:

- ◆ 15.71 percent are African American firms;
- ◆ 6.09 percent are Asian American firms;
- ◆ 5.35 percent are Hispanic American firms;
- ◆ 0.85 percent are Native American firms;
- ◆ 28.00 percent are MBE firms;
- ◆ 19.75 percent are Nonminority female firms; and
- ◆ 52.25 percent are Non-M/WBE firms.

TABLE 4-5.
ESTIMATION OF AVAILABLE FIRMS, **GOODS & SERVICES**

BUSINESS OWNERSHIP CLASSIFICATION	% OF AVAILABLE FIRMS
African Americans	15.71%
Asian Americans	6.09%
Hispanic Americans	5.35%
Native Americans	0.85%
Total MBE Firms	28.00%
Nonminority Females	19.75%
Total M/WBE Firms	47.75%
Non-M/WBE Firms	52.25%
TOTAL	100.00%

Source: Custom Census Analysis. Due to rounding, it may not add up to 100%
Study Period: July 1, 2014, through June 30, 2019 (FY2015 – FY2019).

4.3 Disparity Analyses and Significance Testing

Building on our understanding of WSSC Water’s vendor utilization (**Chapter 3**) and the availability estimates presented in the previous section of this chapter (**Section 4.2**), we can use this information to identify potential disparities in WSSC Water’s procurement. A summary of the approach is provided in **Section 4.3.1**, followed by the results of these disparity calculations and associated statistical significance testing in **Section 4.3.2**.

4.3.1 Disparity Analysis Methodology

MGT’s disparity index methodology yields a value that is easily calculable, understandable in its interpretation, and universally comparable such that a disparity in utilization within the minority- and female-owned firms can be assessed comparing the utilization of nonminority- and male-owned firms. The disparity index gives the evidence necessary to infer that discrimination in the marketplace has occurred. *Where there is a significant statistical disparity between the number of qualified minority contractors willing and able to perform a particular service and the number of such contractors actually engaged by the locality or the locality’s prime contractors, an inference of discriminatory exclusion could arise*²⁷. The inference of discrimination need not be proven correct by the government. As noted by the Tenth Circuit, and cited by the Fourth Circuit in *Rowe*, in upholding Denver’s M/WBE Program, strong evidence supporting Denver’s determination that necessary remedial action need not have been based upon “irrefutable or definitive” proof of discrimination. It was sufficient that the statistical evidence created an inference of discriminatory motivation, and evidence of marketplace discrimination was properly used to meet strict scrutiny. It is not the government’s burden but rather the plaintiff who must prove by a preponderance of the evidence that such proof does not support those inferences²⁸.

Disparity, in this context, is the analysis of the differences between the utilization of minority- and female-owned firms (as presented in **Chapter 3**) and the respective availability of those firms (**Section 4.2**). Thus, MGT calculated disparity indices to examine whether minority- and female-owned firms received a proportional share of dollars based on the respective availability of minority- and female-owned firms located in the study’s defined relevant market area (as presented in **Chapter 3**) and determine if there was an inference of discrimination in the marketplace.

$$\text{Disparity Index} = \frac{\%U_{m,p_i}}{\%A_{m,p_i}} \times 100$$

U_{m,p_i} = utilization of minorities- and female-owned firms_i for procurement;

A_{m,p_i} = availability of minorities- and female-owned firms_i for procurement;

The **disparity index** is a simple proportional calculation that divides utilization rates (percent of dollars awarded to firms by subcategory) by their associated availability (percent of firms available to work within that same class) and multiplies this value by 100. Thus, a disparity index value of zero (0.00) indicates absolutely no utilization and, therefore, absolute disparity. A disparity index of 100 indicates that utilization is perfectly proportionate to availability, indicating the absence of disparity (all things being equal). Alternately, firms are considered **underutilized** if the disparity indices are less than 100.

²⁷ *Croson*, 488 U.S. at 509; see *Webster*, 51 F.Supp.2d at 1363, 1375.

²⁸ *Concrete Works of Colo. v. City & Cnty. of Denver*, 321 F.3d 950, 971 (10th Cir. 2003). See also *H.B. Rowe Co., Inc. v. Tippett*, 615 F.3d 233, 241 (4th Cir. 2010).

MGT utilizes the “80 percent rule” in determining the indication of discrimination in procurement. MGT’s methodology to measure disparity or indication of discrimination, if any exists, is based on the Equal Employment Opportunity Commission’s (EEOC) “80 percent rule.”²⁹ An employment disparity index below 80 indicates a “substantial disparity”. The Fourth Circuit has accepted the use of the “80 percent rule” as an indicator of discrimination in *Rowe*.³⁰ Therefore, following a similar pattern, firms are considered substantially underutilized (substantial disparity) if the disparity indices are 80 or less.

Aside from the disparity index calculation, MGT also calculates standard deviations or statistical significance for the disparity index results. Standard deviation tests or testing for **statistical significance**, in this context, is the analysis to determine the significance of the difference between the utilization of minority- and female-owned firms and the availability of those firms. This analysis can determine whether the disparities are statistically significant, which lends further statistical support to a finding of discrimination.

Statistical Significance Testing

$$t = \frac{u - a}{\sqrt{\frac{a * (1 - a) * \sum c_i^2}{(\sum c_i)^2}}}$$

t = the t-statistic

u = the ratio of minorities- and female-owned firms’ dollars compared to total dollars
 a = the ratio of M/W/DBE firms to all firms
 c_i = the dollar amount.

Standard deviation measures the probability that a result is a random deviation from a predicted outcome. The greater the number of standard deviations, the lower the probability that the result is random.

Regarding the use of statistical significance in the disparity study context, the National Cooperative Highway Research Program Report 644³¹ notes that:

- ♦ “. . . for statistical disparities to be taken as legally dispositive in the discrimination context, they should be (a) statistically significant and (b) “substantively” significant. Substantive significance is taken to mean, for example, a DBE utilization measure that is less than or equal to 80% of the corresponding DBE availability measure.”

Note that p-values are used to determine whether the differences between two populations feature legitimate differences (that would be sustained if we continued to collect more observations) or if the variation between them is simply a product of normal random variation between observations that would be washed out if we collected more data. The Fourth Circuit approved using the t-test to calculate p-values for disparity indices in *H.B. Rowe v. Tippett*, 615 F.3d 233, 244-45 (4th Cir 2010).

Thus, MGT applies two accepted tests to determine statistical significance: (1) whether the disparity index is less than or equal to 80 percent of respective M/WBE availability, which is labeled “substantial disparity,” and (2) whether the disparity index passes the t-test determination of statistical significance.

²⁹ Equal Employment Opportunity Commission, *Uniform Guidelines on Employee Selection Procedures*, Section 4, Part D, “Adverse impact and the ‘four-fifths rule.’”

³⁰ *H.B. Rowe Co., Inc. v. Tippett*, 615 F.3d 233, 244 (4th Cir. 2010).

³¹ Transportation Research Board of the National Academies, *National Cooperative Highway Research Program Report 644, Guidelines for Conducting a Disparity and Availability Study for the Federal DBE Program* (2010), pages 49-50.

4.3.2 Disparity Analyses and Statistical Significance Testing

This section includes inputs and calculations of disparity indices and significance testing for each of the procurement categories and ownership classifications. Corresponding detailed analyses showing the disparity analysis of firms by race, ethnicity, and gender are presented in **Appendix E**. Analysis of disparities across all procurement categories in **Table 4-6** reveals:

- ◆ African American firms were underutilized with a substantial and statistically significant disparity index of 71.71;
- ◆ Asian American firms were underutilized, with a disparity index of 83.23;
- ◆ Hispanic American firms were underutilized, with a disparity index of 82.77;
- ◆ Native American firms were substantially underutilized, with a disparity index of 10.39;
- ◆ MBE firms were underutilized, with a substantial and statistically significant disparity index of 77.45;
- ◆ Nonminority Female firms were underutilized, with a substantial and statistically significant disparity index of 56.66; and
- ◆ M/WBEs firms were underutilized, with a substantial and statistically significant disparity index of 70.57.

TABLE 4-6. DISPARITY INDICES AND SIGNIFICANCE TESTING,
ALL PROCUREMENT CATEGORIES

Ethnic/Gender Classification	Utilization	Availability	Disparity Index	Disparity Impact	Statistical Significance	Disparity Conclusion
African Americans	8.89%	12.39%	71.71	Underutilization	**	Disparity
Asian Americans	7.26%	8.73%	83.23	Underutilization		Disparity
Hispanic Americans	8.18%	9.88%	82.77	Underutilization		Disparity
Native Americans	0.05%	0.48%	10.39	Underutilization		Disparity
Total MBE Firms	24.38%	31.48%	77.45	Underutilization	***	Disparity
Nonminority Females	8.82%	15.58%	56.66	Underutilization	***	Disparity
Total M/WBE Firms	33.20%	47.05%	70.57	Underutilization	***	Disparity
Non-M/WBE Firms	66.80%	52.95%	126.16	Overutilization	***	

Note: Disparity index values may vary slightly from calculations of depicted figures due to rounding of presented levels of utilization and availability. “*” indicates an adverse disparity that is statistically significant at the 15% level or better (85% confidence). “***” indicates the disparity is significant at a 10% level or better (90% confidence). “****” indicates significance at a 5% level or better (95% confidence). **BOLD** indicates substantial statistically significant disparity.

Disparity indices and significance testing for **Construction** appear in **Table 4-7**. Noteworthy observations include:

- ◆ African American firms were underutilized, with a substantial and statistically significant disparity index of 52.10;
- ◆ Asian American firms were underutilized, with a disparity index of 97.86;
- ◆ Hispanic American firms were underutilized, with a disparity index of 91.88;
- ◆ Native American firms were substantially underutilized, with a disparity index of 30.23;
- ◆ MBE firms were substantially underutilized, with a disparity index of 79.95;
- ◆ Nonminority Female firms were substantially underutilized, with a disparity index of 77.74; and
- ◆ M/WBEs firms were underutilized, with a substantial and statistically significant disparity index of 79.24.

TABLE 4-7. DISPARITY INDICES AND SIGNIFICANCE TESTING,
CONSTRUCTION

Ethnic/Gender Classification	Utilization	Availability	Disparity Index	Disparity Impact	Statistical Significance	Disparity Conclusion
African Americans	5.09%	9.77%	52.10	Underutilization		Disparity
Asian Americans	7.06%	7.22%	97.86	Underutilization		Disparity
Hispanic Americans	12.12%	13.19%	91.88	Underutilization		Disparity
Native Americans	0.09%	0.29%	30.23	Underutilization		Disparity
Total MBE Firms	24.36%	30.47%	79.95	Underutilization		Disparity
Nonminority Females	11.32%	14.56%	77.74	Underutilization		Disparity
Total M/WBE Firms	35.68%	45.03%	79.24	Underutilization		Disparity
Non-M/WBE Firms	64.32%	54.97%	117.01	Overutilization	***	

Note: Disparity index values may vary slightly from calculations of depicted figures due to rounding of presented levels of utilization and availability. “*” indicates an adverse disparity that is statistically significant at the 15% level or better (85% confidence). “***” indicates the disparity is significant at a 10% level or better (90% confidence). “****” indicates significance at a 5% level or better (95% confidence). **BOLD** indicates substantial statistically significant disparity.

The calculation of disparity indices and significance testing for the **Architecture & Engineering** procurement category are depicted in **Table 4-8**. Relevant findings include:

- ◆ African American firms were underutilized, with a substantial and statistically significant disparity index of 55.33;
- ◆ Asian American firms were underutilized, with a disparity index of 80.67;
- ◆ Hispanic American firms were substantially underutilized, with a disparity index of 57.25;
- ◆ Native American firms were substantially underutilized, with a disparity index of 0.00;
- ◆ MBE firms were underutilized, with a substantial and statistically significant disparity index of 66.13;
- ◆ Nonminority Female firms were underutilized, with a substantial and statistically significant disparity index of 20.29; and

- ◆ M/WBEs firms were underutilized, with a substantial and statistically significant disparity index of 53.93.

TABLE 4-8. DISPARITY INDICES AND SIGNIFICANCE TESTING,
ARCHITECTURE & ENGINEERING

Ethnic/Gender Classification	Utilization	Availability	Disparity Index	Disparity Impact	Statistical Significance	Disparity Conclusion
African Americans	7.98%	14.42%	55.33	Underutilization	**	Disparity
Asian Americans	14.77%	18.31%	80.67	Underutilization		Disparity
Hispanic Americans	4.22%	7.38%	57.25	Underutilization		Disparity
Native Americans	0.00%	0.68%	0.00	Underutilization		Disparity
Total MBE Firms	26.97%	40.78%	66.13	Underutilization	***	Disparity
Nonminority Females	3.00%	14.78%	20.29	Underutilization	***	Disparity
Total M/WBE Firms	29.97%	55.56%	53.93	Underutilization	***	Disparity
Non-M/WBE Firms	70.03%	44.44%	157.60	Overutilization	***	

Note: Disparity index values may vary slightly from calculations of depicted figures due to rounding of presented levels of utilization and availability. “*” indicates an adverse disparity that is statistically significant at the 15% level or better (85% confidence). “**” indicates the disparity is significant at a 10% level or better (90% confidence). “***” indicates significance at a 5% level or better (95% confidence). **BOLD** indicates substantial statistically significant disparity.

Disparity indices and significance testing for the **Professional Services** sector are presented in **Table 4-9**. Some findings include that:

- ◆ African American firms were underutilized, with a substantial and statistically significant disparity index of 39.37;
- ◆ Asian American firms were substantially underutilized, with a disparity index of 56.26;
- ◆ Hispanic American firms were substantially underutilized, with a disparity index of 12.91;
- ◆ Native American firms were substantially underutilized, with a disparity index of 0.00;
- ◆ MBE firms were underutilized, with a substantial and statistically significant disparity index of 41.21;
- ◆ Nonminority Female firms were underutilized, with a substantial and statistically significant disparity index of 28.60; and
- ◆ M/WBEs firms were underutilized, with a substantial and statistically significant disparity index of 37.69.

TABLE 4-9. DISPARITY INDICES AND SIGNIFICANCE TESTING,
PROFESSIONAL SERVICES

Ethnic/Gender Classification	Utilization	Availability	Disparity Index	Disparity Impact	Statistical Significance	Disparity Conclusion
African Americans	6.78%	17.21%	39.37	Underutilization	**	Disparity
Asian Americans	6.54%	11.62%	56.26	Underutilization		Disparity
Hispanic Americans	0.57%	4.44%	12.91	Underutilization		Disparity
Native Americans	0.00%	0.43%	0.00	Underutilization		Disparity
Total MBE Firms	13.89%	33.71%	41.21	Underutilization	***	Disparity
Nonminority Females	3.73%	13.05%	28.60	Underutilization	**	Disparity
Total M/WBE Firms	17.62%	46.75%	37.69	Underutilization	***	Disparity
Non-M/WBE Firms	82.38%	53.25%	154.71	Overutilization	***	

Note: Disparity index values may vary slightly from calculations of depicted figures due to rounding of presented levels of utilization and availability. “*” indicates an adverse disparity that is statistically significant at the 15% level or better (85% confidence). “**” indicates the disparity is significant at a 10% level or better (90% confidence). “***” indicates significance at a 5% level or better (95% confidence). **BOLD** indicates substantial statistically significant disparity.

Table 4-10 presents disparity indices and significance testing for the **Goods & Services** sector which include the following findings:

- ◆ Asian American firms were substantially underutilized, with a disparity index of 67.27;
- ◆ Hispanic American firms were substantially underutilized, with a disparity index of 71.58;
- ◆ Native American firms were substantially underutilized, with a disparity index of 0.00;
- ◆ MBE firms were underutilized, with a disparity index of 99.61;
- ◆ Nonminority Female firms were underutilized, with a substantial and statistically significant disparity index of 40.45; and
- ◆ M/WBEs firms were underutilized, with a substantial and statistically significant disparity index of 75.14.

TABLE 4-10. DISPARITY INDICES AND SIGNIFICANCE TESTING,
GOODS & SERVICES

Ethnic/Gender Classification	Utilization	Availability	Disparity Index	Disparity Impact	Statistical Significance	Disparity Conclusion
African Americans	19.97%	15.71%	127.08	Overutilization		
Asian Americans	4.09%	6.09%	67.27	Underutilization		Disparity
Hispanic Americans	3.83%	5.35%	71.58	Underutilization		Disparity
Native Americans	0.00%	0.85%	0.00	Underutilization		Disparity
Total MBE Firms	27.89%	28.00%	99.61	Underutilization		Disparity
Nonminority Females	7.99%	19.75%	40.45	Underutilization	***	Disparity
Total M/WBE Firms	35.88%	47.75%	75.14	Underutilization	***	Disparity
Non-M/WBE Firms	64.12%	52.25%	122.72	Overutilization	***	

Note: Disparity index values may vary slightly from calculations of depicted figures due to rounding of presented levels of utilization and availability. “*” indicates an adverse disparity that is statistically significant at the 15% level or better (85% confidence). “**” indicates the disparity is significant at a 10% level or better (90% confidence). “***” indicates significance at a 5% level or better (95% confidence). **BOLD** indicates substantial statistically significant disparity.

4.4 Conclusions

The calculations of availability and disparity within this chapter and the preceding depiction of utilization serve as part of the evidentiary foundation for the future of WSSC Water’s M/WBE program. These analyses provide part of the quantitative legal justification for any current or future remedies to assist M/WBEs within the market. In tandem with the results of the qualitative and private sector analyses, these results provide the evidence necessary to infer that discrimination in the marketplace has occurred. As summarized in the table below (**Table 4-11**), disparities between utilization and availability have been observed for most procurement and M/WBE categories included within the scope of the study, both in terms of the order of magnitude (disparity indices less than or equal to 80) and statistical significance, and thus an inference of discrimination in the marketplace can be derived. Where individual race, ethnicity, and gender categories were not statistically significant alone,³² it’s important to understand that they are part of the MBE and M/WBE total categories that were overall substantial and statistically significantly underutilized, and an inference of discrimination can be made where those categories saw substantial individual disparities.

TABLE 4-11. DISPARITY ANALYSIS SUMMARY

Procurement Category	All	Construction	Architecture & Engineering	Professional Services	Goods & Services
African Americans	Disparity	Disparity	Disparity	Disparity	No Disparity
Asian Americans	Disparity	Disparity	Disparity	Disparity	Disparity
Hispanic Americans	Disparity	Disparity	Disparity	Disparity	Disparity
Native Americans	Disparity	Disparity	Disparity	Disparity	Disparity
Total MBE Firms	Disparity	Disparity	Disparity	Disparity	Disparity
Nonminority Females	Disparity	Disparity	Disparity	Disparity	Disparity
Total M/WBE Firms	Disparity	Disparity	Disparity	Disparity	Disparity

BOLD indicates substantial statistically significant disparity.

³² This could be attributed to the small number of contracts awarded to these firms or the small actual number of firms in the marketplace.

5. Private Sector Analysis

5.1 Introduction

The **Legal Framework** presented in **Appendix A** explains that a government entity must have evidence of active or passive discrimination to permit the institution of a minority- and woman-owned business enterprise (M/WBE) program. Courts require a *compelling interest* analysis showing a connection between the government or agency and the public or private discrimination that may exist within their jurisdiction. This chapter focuses on the overarching question:

- ◆ ***Does evidence of discrimination in the private sector marketplace support WSSC Water’s continuance of its MBE program to avoid becoming a passive participant in discrimination?***

Chapter Sections	
5.1	Introduction
5.2	Private Sector Disparities in SBO Census Data
5.3	Private Sector Disparities in ABS Census Data
5.4	Analysis of Race, Ethnicity, and Gender Effects on Self-Employment Rates
5.5	Access to Credit
5.6	Conclusion

Passive discrimination describes a circumstance where a public entity resides in a market with measurable discrimination in the public and private sector but fails to take proactive actions to implement remedies. Courts have favorably looked upon private sector analyses as support to determine *compelling interest* in M/WBE programs:

- ◆ Defining passive participation, Justice O’Connor in *Croson* stated, “if the city could show that it had essentially become a ‘passive participant’ in a system of racial exclusion practiced by elements of the local construction industry, we think it clear that the city could take affirmative steps to dismantle such a system.”³³
- ◆ In *Adarand*, the Tenth Circuit favorably cited evidence of capital market discrimination as relevant in establishing the factual predicate for the federal DBE program.³⁴
- ◆ *Concrete Works IV* found that barriers to business formation were relevant insofar as the evidence demonstrated that M/WBEs were “precluded from the outset from competing for public construction contracts.”³⁵
- ◆ In *Adarand*, the courts concluded a compelling interest for a government Disadvantaged Business Enterprise (DBE) program in part on evidence of private-sector discrimination.³⁶
- ◆ Along related lines, a court found regression analysis of census data to be relevant evidence showing barriers to M/WBE formation.³⁷

³³ *Richmond v. J. A. Croson Co.*, 488 U.S. 469, 492 (1989).

³⁴ *Adarand Constructors, Inc. v. Slater*, 228 F.3d 1147, 1168-70 (10th Cir. 2000).

³⁵ *Concrete Works of Colo. v. City & Cnty. of Denver*, 321 F.3d 950, 977 (10th Cir. 2003).

³⁶ *Adarand Constructors, Inc. v. Slater*, 228 F.3d 1147 (10th Cir. 2000)

³⁷ *Concrete Works IV*, 321 F.3d 950, 967-69 (10th Cir. 2003).

Thus, in many circumstances, discriminatory practices in the private marketplace may show or serve to support the *compelling interest* required by courts to support an agency's program to intervene and prevent the agency from becoming a *passive participant* in discrimination.

These court decisions support an investigation into the existence of discrimination in the private sector to determine whether or not evidence exists warranting M/WBE programs. This chapter provides evidence for the overarching question of whether or not WSSC Water has a continued compelling interest in maintaining its MBE program based on discriminatory circumstances observed in the private sector. Three sources of data can help to answer the overarching research question regarding disparities in the private sector:

- ◆ 2012 Census Survey of Business Owners (SBO) and 2017 Census Annual Business Survey (ABS) data, which are used to determine:
 1. *Do marketplace disparities exist in the private sector regarding revenue within similar WSSC Water procurement categories for firms owned by minorities or females?*
- ◆ 2015-2019 Census American Community Survey (ACS) Public Used Microdata Sample (PUMS) data, which is used to determine whether, even after controlling for a number of relevant factors, there are disparities between minority- and women-owned firms on the one hand, and non-minority, non-women owned firms on the other hand. Among the questions this data allows us to answer are:
 1. *Does racial, ethnic, and gender status impact individual wages even after controlling for differences among firms?*
 2. *Does racial, ethnic and gender status impact business owner earnings even after controlling for differences among firms?*
 3. *Are racial, ethnic, and gender minority groups less likely than nonminority males (non-M/WBEs) to be self-employed after controlling for differences? If so, does race, ethnicity, or gender have a role in the disparity?*
 4. *If minority and female-owned business enterprises (M/WBEs) and nonminority male-owned firms shared similar traits and marketplace "conditions" (i.e., similar "rewards" in terms of capital, wages, earning, etc.), what would be the effect on rates of self-employment by race, ethnicity, and gender?*

Notably, the results of this private sector analysis mirrors many of the same qualitative and anecdotal results offered in **Chapter 6, Anecdotal Analysis**, regarding discrimination faced by M/WBE firms in attempting to secure work on private sector projects.

5.2 Private Sector Disparities in SBO Census Data

To answer the overarching research question regarding the existence of disparities in the private sector, as well as the specific question of whether these disparities exist in procurement categories relevant to the WSSC Water contracting domain, MGT obtained and analyzed the U.S. Census Bureau's 2012 Survey

of Business Owners (SBO) data.³⁸ SBO provides data on economic and demographic characteristics for businesses and business owners by geography (such as states and metropolitan areas), categorized by industries defined by North American Industry Classification System (NAICS) codes, and supporting information, including firm receipts (sales),³⁹ firm employment size, and business ownership classification. The survey has been administered every five years since 1972 as part of the economic census.

The SBO gathers and reports data on (1) firms with paid employees, including workers on the payroll (employer firms), (2) firms without paid employees, including sole proprietors and partners of unincorporated businesses that do not have any other employees on the payroll (nonemployer firms), as well as (3) in aggregate across employer and nonemployer firms (all). MGT calculated private sector disparity indices to examine whether M/WBE firms in any of these categories received a proportionate share of firm sales based on the availability of M/WBE firms. Disparity indices were reviewed for all firms and employer firms. It should be noted that all the disparity indices in the SBO tables are statistically significant within a **95 percent** confidence interval.

The following NAICS codes⁴⁰ were analyzed because they align with the procurement categories used for WSSC Water's utilization analysis:

- ◆ NAICS Code 23, Construction
- ◆ NAICS Code 42, Wholesale Trade
- ◆ NAICS Code 54, Professional, Scientific, and Technical Services
- ◆ NAICS Code 56, Administrative and Support and Waste Management and Remediation Services
- ◆ NAICS Code 81, Other Services (Except Public Administration)

5.2.1 Results of Analysis

This private sector analysis presents disparity results based on the WSSC Water geographic marketplace. The WSSC Water marketplace contains the following counties in the Washington metropolitan statistical area: Anne Arundel County, MD; Arlington County, VA; Baltimore County, MD; Calvert County, MD; Carroll County, MD; Charles County, MD; City of Alexandria, VA; City of Baltimore, MD; City of Fairfax, VA; City of Falls Church, VA; City of Fredericksburg, VA; City of Manassas, VA; Clarke County, VA; Culpeper County, VA; District of Columbia, DC; Fairfax County, VA; Fauquier County, VA; Frederick County, MD; Howard County, MD; Jefferson County, WV; Loudoun County, VA; Montgomery County, MD; Prince George's County, MD; Prince William County, VA; Spotsylvania County, VA; Stafford County, VA; and Warren County, VA.

³⁸ These represent the most recent available data provided through the SBO program and were released in 2016.

³⁹ Sales includes total shipments, receipts, revenue, or business done by the firm.

⁴⁰ The two-digit NAICS code level was utilized as those codes are the most prevalent level across all the 2012 SBO data.

5.2.2 WSSC Water Marketplace

Tables 5-1 through 5-5 show the measures of private sector disparities based on U.S. Census 2012 SBO data for the population of available firms in the WSSC Water marketplace by race, ethnicity, and gender for construction; wholesale trade; professional, scientific, and technical services; administrative and support and waste management and remediation services; and other services (except public administration).

Based on the analysis of the U.S. Census 2012 SBO data, overall, there remains a significant gap between the market share of M/WBE firms and their share of the WSSC Water marketplace business population, where data was available.

NAICS Code 23: Construction, WSSC Water Marketplace

Table 5-1 shows the construction availability, sales, and disparity results (NAICS Code 23).

There was a total of 73,282 construction firms (all firms⁴¹) in the WSSC Water marketplace in 2012.

- ◆ African American firms (disparity index of 16.27) were substantially and significantly underutilized, accounting for 11.63 percent of all firms and 1.89 percent of sales.
- ◆ American Indian and Alaska Native firms (disparity index of 27.39) were substantially and significantly underutilized, accounting for 0.67 percent of all firms and 0.18 percent of sales.
- ◆ Asian American firms (disparity index of 25.67) were substantially and significantly underutilized, accounting for 5.80 percent of all firms and 1.49 percent of sales.
- ◆ Hispanic American firms (disparity index of 14.44) were substantially and significantly underutilized, accounting for 25.82 percent of all firms and 3.73 percent of sales.
- ◆ Native Hawaiian and Pacific Islander firms (disparity index of 0.00) were substantially and significantly underutilized, accounting for 0.05 percent of all firms and 0.00 percent of sales. Caution should be taken with this result as census data for this group was minimal.
- ◆ Data for nonminority female firms (disparity index of 43.37) were substantially and significantly underutilized, accounting for 17.03 percent of all firms and 7.39 percent of sales.

There were 17,527 construction employer firms⁴² in the WSSC Water marketplace in 2012.

- ◆ African American firms (disparity index of 40.30) were substantially and significantly underutilized, accounting for 3.91 percent of all firms and 1.58 percent of sales.
- ◆ American Indian and Alaska Native firms (disparity index of 35.25) were substantially and significantly underutilized, accounting for 0.51 percent of all firms and 0.18 percent of sales.

⁴¹ All firms include firms with and without payroll at any time during 2012.

⁴² Employer firms include firms with payroll at any time during 2012.

- ◆ Asian American firms (disparity index of 31.75) were substantially and significantly underutilized, accounting for 4.14 percent of all firms and 1.32 percent of sales.
- ◆ Hispanic American firms (disparity index of 27.01) were substantially and significantly underutilized, accounting for 10.04 percent of all firms and 2.71 percent of sales.
- ◆ Native Hawaiian and Pacific Islander firm data did not allow for a proper analysis.
- ◆ Data for nonminority female firms (disparity index of 33.40) were substantially and significantly underutilized, accounting for 21.29 percent of all firms and 7.11 percent of sales.

TABLE 5-1.
PRIVATE SECTOR CENSUS DISPARITIES
NAICS CODE 23, CONSTRUCTION
U.S. CENSUS 2012 SURVEY OF BUSINESS OWNERS,
WSSC WATER MARKETPLACE

BUSINESS OWNERSHIP CLASSIFICATION	ALL FIRMS ¹ (#)	ALL FIRMS, SALES ² (\$1,000)	EMPLOYER FIRMS (#)	EMPLOYER FIRMS SALES (\$1,000)
All Firms	73,282	62,530,585	17,527	59,642,642
Nonminority Male	28,584	53,351,069	10,536	51,998,704
African American	8,525	1,183,683	685	940,300
American Indian and Alaska Native	492	114,999	89	106,843
Asian	4,247	930,185	726	785,191
Hispanic ⁴	18,918	2,331,147	1,759	1,617,895
Native Hawaiian and Other Pacific Islander	33	0	0	0
Nonminority Female	12,483	4,619,502	3,732	4,245,709
PERCENTAGE OF MARKETPLACE				
All Firms	100.00%	100.00%	100.00%	100.00%
Nonminority Male	39.01%	85.32%	60.11%	87.11%
African American	11.63%	1.89%	3.91%	1.58%
American Indian and Alaska Native	0.67%	0.18%	0.51%	0.18%
Asian	5.80%	1.49%	4.14%	1.32%
Hispanic ⁴	25.82%	3.73%	10.04%	2.71%
Native Hawaiian and Other Pacific Islander	0.05%	0.00%	N/A	N/A
Nonminority Female	17.03%	7.39%	21.29%	7.11%
DISPARITY RATIOS ³				
All Firms		100.00		100.00
Nonminority Male		218.74		144.91
African American		16.27		40.30
American Indian and Alaska Native		27.39		35.25
Asian		25.67		31.75
Hispanic ⁴		14.44		27.01
Native Hawaiian and Other Pacific Islander		0.00		N/A
Nonminority Female		43.37		33.40

Source: MGT Consulting Group, LLC conducted private sector disparities marketplace analyses based on U.S. Census Bureau, 2012 Survey of Business Owners (SBO) data.

¹Firms include employer and nonemployer firms since nonemployer firms can provide services at the subcontractor/subconsultant level and hire independent contractors to increase capacity. Employer firms include firms with payroll at any time during 2012.

²Sales includes total shipments, receipts, revenue, or business done by the firm.

³Disparity index is the ratio of the percentage of sales to the percentage of available firms multiplied by 100.00. A disparity index below 80.00 indicates a substantial level of disparity.

⁴Hispanic firms are considered an ethnicity in this Census data and therefore may be double-counted in race categories, which leads to percentages equaling greater than 100%.

N/A Denotes that there were no firms or sales for the classification.

Disparity results are statistically significant within a 95 percent confidence interval.

NAICS Code 42: Wholesale Trade, WSSC Water Marketplace

Table 5-2 shows wholesale trade availability, sales, and disparity results (NAICS Code 42).

There was a total of 13,480 wholesale trade firms (all firms) in the WSSC Water marketplace in 2012.

- ◆ African American firms (disparity index of 14.93) were substantially and significantly underutilized, accounting for 10.83 percent of all firms and 1.62 percent of sales.
- ◆ American Indian and Alaska Native marketplace firm data did not allow for a proper analysis.
- ◆ Asian American firms (disparity index of 16.19) were substantially and significantly underutilized, accounting for 9.40 percent of all firms and 1.52 percent of sales.
- ◆ Hispanic American firms (disparity index of 15.44) were substantially and significantly underutilized, accounting for 3.32 percent of all firms and 0.51 percent of sales.
- ◆ Native Hawaiian and Pacific Islander marketplace firm data did not allow for a proper analysis.
- ◆ Data for nonminority female firms (disparity index of 19.89) were substantially and significantly underutilized, accounting for 29.10 percent of all firms and 5.79 percent of sales.

There was a total of 6,794 wholesale trade employer firms in the WSSC Water marketplace in 2012.

- ◆ African American firms (disparity index of 60.64) were substantially and significantly underutilized, accounting for 2.63 percent of all firms and 1.60 percent of sales.
- ◆ American Indian and Alaska Native marketplace firm data was minimal and therefore did not allow for a proper analysis.
- ◆ Asian American firms (disparity index of 16.76) were substantially and significantly underutilized, accounting for 8.35 percent of all firms and 1.40 percent of sales.
- ◆ Hispanic American firms (disparity index of 32.70) were substantially and significantly underutilized, accounting for 1.55 percent of all firms and 0.51 percent of sales.
- ◆ Native Hawaiian and Pacific Islander marketplace firm data did not allow for a proper analysis.
- ◆ Data for nonminority female firms (disparity index of 26.89) were substantially and significantly underutilized, accounting for 20.97 percent of all firms and 5.64 percent of sales.

TABLE 5-2.
PRIVATE SECTOR CENSUS DISPARITIES
NAICS CODE 42, WHOLESALE TRADE
U.S. CENSUS 2012 SURVEY OF BUSINESS OWNERS,
WSSC WATER MARKETPLACE

BUSINESS OWNERSHIP CLASSIFICATION	ALL FIRMS ¹ (#)	ALL FIRMS, SALES ² (\$1,000)	EMPLOYER FIRMS (#)	EMPLOYER FIRMS SALES (\$1,000)
All Firms	13,480	125,468,184	6,794	124,702,218
Nonminority Male	6,382	113,622,373	4,518	113,301,799
African American	1,460	2,029,518	179	1,992,288
American Indian and Alaska Native	N/A	N/A	N/A	N/A
Asian	1,267	1,909,856	567	1,744,095
Hispanic ⁴	448	643,925	105	630,289
Native Hawaiian and Other Pacific Islander	N/A	N/A	N/A	N/A
Nonminority Female	3,923	7,262,512	1,425	7,033,747
PERCENTAGE OF MARKETPLACE				
All Firms	100.00%	100.00%	100.00%	100.00%
Nonminority Male	47.34%	90.56%	66.50%	90.86%
African American	10.83%	1.62%	2.63%	1.60%
American Indian and Alaska Native	N/A	N/A	N/A	N/A
Asian	9.40%	1.52%	8.35%	1.40%
Hispanic ⁴	3.32%	0.51%	1.55%	0.51%
Native Hawaiian and Other Pacific Islander	N/A	N/A	N/A	N/A
Nonminority Female	29.10%	5.79%	20.97%	5.64%
DISPARITY RATIOS ³				
All Firms		100.00		100.00
Nonminority Male		191.28		136.63
African American		14.93		60.64
American Indian and Alaska Native		N/A		N/A
Asian		16.19		16.76
Hispanic ⁴		15.44		32.70
Native Hawaiian and Other Pacific Islander		N/A		N/A
Nonminority Female		19.89		26.89

Source: MGT Consulting Group, LLC conducted private sector disparities marketplace analyses based on U.S. Census Bureau, 2012 Survey of Business Owners (SBO) data.

¹Firms include employer and nonemployer firms since nonemployer firms can provide services at the subcontractor/subconsultant level and hire independent contractors to increase capacity. Employer firms include firms with payroll at any time during 2012.

²Sales includes total shipments, receipts, revenue, or business done by the firm.

³Disparity index is the ratio of the percentage of sales to the percentage of available firms multiplied by 100.00. A disparity index below 80.00 indicates a substantial level of disparity.

⁴Hispanic firms are considered an ethnicity in this Census data and therefore may be double counted in race categories, which leads to percentages equaling greater than 100%.

N/A Denotes that there were no firms or sales for the classification.

Disparity results are statistically significant within a 95 percent confidence interval.

NAICS Code 54: Professional, Scientific and Technical Services, WSSC Water Marketplace

Table 5-3 shows the availability, sales, and disparity results for professional, scientific, and technical services (NAICS Code 54).

There was a total of 160,209 professional, scientific, and technical services firms (all firms) in the WSSC Water marketplace in 2012.

- ◆ African American firms (disparity index of 15.47) were substantially and significantly underutilized, accounting for 13.82 percent of all firms and 2.14 percent of sales.
- ◆ American Indian and Alaska Native firms (disparity index of 26.09) were substantially and significantly underutilized, accounting for 0.49 percent of all firms and 0.13 percent of sales.
- ◆ Asian American firms (disparity index of 58.17) were substantially and significantly underutilized, accounting for 10.43 percent of all firms and 6.07 percent of sales.
- ◆ Hispanic American firms (disparity index of 33.54) were substantially and significantly underutilized, accounting for 4.70 percent of all firms and 1.58 percent of sales.
- ◆ Native Hawaiian and Pacific Islander firms (disparity index of 184.27) were overutilized, accounting for 0.02 percent of all firms and 0.03 percent of sales.
- ◆ Data for nonminority female firms (disparity index of 22.76) were substantially and significantly underutilized, accounting for 41.71 percent of all firms and 9.49 percent of sales.

There was a total of 35,227 professional, scientific, and technical services employer firms in the WSSC Water marketplace in 2012.

- ◆ African American firms (disparity index of 32.87) were substantially and significantly underutilized, accounting for 5.75 percent of all firms and 1.89 percent of sales.
- ◆ American Indian and Alaska Native firms (disparity index of 45.72) were substantially and significantly underutilized, accounting for 0.27 percent of all firms and 0.12 percent of sales.
- ◆ Asian American firms (disparity index of 43.84) were substantially and significantly underutilized, accounting for 13.70 percent of all firms and 6.00 percent of sales.
- ◆ Hispanic American firms (disparity index of 55.36) were substantially and significantly underutilized, accounting for 2.66 percent of all firms and 1.47 percent of sales.
- ◆ Native Hawaiian and Pacific Islander firms (disparity index of 138.98) were overutilized, accounting for 0.03 percent of all firms and 0.04 percent of sales.
- ◆ Data for nonminority female firms (disparity index of 28.97) were substantially and significantly underutilized, accounting for 29.15 percent of all firms and 8.45 percent of sales.

TABLE 5-3.
PRIVATE SECTOR CENSUS DISPARITIES
NAICS CODE 54, PROFESSIONAL, SCIENTIFIC, AND TECHNICAL SERVICES
U.S. CENSUS 2012 SURVEY OF BUSINESS OWNERS,
WSSC WATER MARKETPLACE

BUSINESS OWNERSHIP CLASSIFICATION	ALL FIRMS ¹ (#)	ALL FIRMS, SALES ² (\$1,000)	EMPLOYER FIRMS (#)	EMPLOYER FIRMS SALES (\$1,000)
All Firms	160,209	162,342,053	35,227	155,279,238
Nonminority Male	113,009	146,196,707	27,334	140,485,892
Minority	47,200	16,145,346	7,893	14,793,346
African American	22,138	3,469,877	2,027	2,936,690
American Indian and Alaska Native	787	208,091	94	189,437
Asian	16,712	9,850,939	4,825	9,323,309
Hispanic ⁴	7,533	2,560,421	938	2,288,774
Native Hawaiian and Other Pacific Islander	30	56,018	9	55,136
Nonminority Female	66,816	15,411,530	10,270	13,113,814
PERCENTAGE OF MARKETPLACE				
All Firms	100.00%	100.00%	100.00%	100.00%
Nonminority Male	70.54%	90.05%	77.59%	90.47%
Minority	29.46%	9.95%	22.41%	9.53%
African American	13.82%	2.14%	5.75%	1.89%
American Indian and Alaska Native	0.49%	0.13%	0.27%	0.12%
Asian	10.43%	6.07%	13.70%	6.00%
Hispanic ⁴	4.70%	1.58%	2.66%	1.47%
Native Hawaiian and Other Pacific Islander	0.02%	0.03%	0.03%	0.04%
Nonminority Female	41.71%	9.49%	29.15%	8.45%
DISPARITY RATIOS³				
All Firms		100.00		100.00
Nonminority Male		127.67		116.60
Minority		33.76		42.52
African American		15.47		32.87
American Indian and Alaska Native		26.09		45.72
Asian		58.17		43.84
Hispanic ⁴		33.54		55.36
Native Hawaiian and Other Pacific Islander		184.27		138.98
Nonminority Female		22.76		28.97

Source: MGT Consulting Group, LLC conducted private sector disparities marketplace analyses based on U.S. Census Bureau, 2012 Survey of Business Owners (SBO) data.

¹Firms include employer and nonemployer firms since nonemployer firms can provide services at the subcontractor/subconsultant level and hire independent contractors to increase capacity. Employer firms include firms with payroll at any time during 2012.

²Sales includes total shipments, receipts, revenue, or business done by the firm.

³Disparity index is the ratio of the percentage of sales to the percentage of available firms multiplied by 100.00. A disparity index below 80.00 indicates a substantial level of disparity.

⁴Hispanic firms are considered an ethnicity in this Census data and therefore may be double counted in race categories, which leads to percentages equaling greater than 100%.

Disparity results are statistically significant within a 95 percent confidence interval.

NAICS Code 56: Administrative and Support and Waste Management and Remediation Services, WSSC Water Marketplace

Table 5-4 shows the availability, sales, and disparity results for administrative, support, waste management, and remediation services (NAICS Code 56).

There were 62,972 administrative and support and waste management and remediation services firms (all firms) in the WSSC Water marketplace in 2012.

- ◆ African American firms (disparity index of 20.15) were substantially and significantly underutilized, accounting for 24.11 percent of all firms and 4.86 percent of sales.
- ◆ American Indian and Alaska Native firms (disparity index of 5.66) were substantially and significantly underutilized, accounting for 0.83 percent of all firms and 0.05 percent of sales.
- ◆ Asian American firms (disparity index of 43.78) were substantially and significantly underutilized, accounting for 6.29 percent of all firms and 2.75 percent of sales.
- ◆ Hispanic American firms (disparity index of 18.29) were substantially and significantly underutilized, accounting for 22.65 percent of all firms and 4.14 percent of sales.
- ◆ Native Hawaiian and Pacific Islander marketplace firm data did not allow for a proper analysis.
- ◆ Data for nonminority female firms (disparity index of 29.12) were substantially and significantly underutilized, accounting for 52.80 percent of all firms and 15.38 percent of sales.

There were 10,857 administrative and support and waste management and remediation services employer firms in the WSSC Water marketplace in 2012.

- ◆ African American firms (disparity index of 48.56) were substantially and significantly underutilized, accounting for 9.05 percent of all firms and 4.40 percent of sales.
- ◆ American Indian and Alaska Native firms (disparity index of 0.00) were substantially and significantly underutilized, accounting for 0.45 percent of all firms and 0.00 percent of sales.
- ◆ Asian American firms (disparity index of 52.57) were substantially and significantly underutilized, accounting for 4.77 percent of all firms and 2.51 percent of sales.
- ◆ Hispanic American firms (disparity index of 40.53) were substantially and significantly underutilized, accounting for 8.61 percent of all firms and 3.49 percent of sales.
- ◆ Native Hawaiian and Pacific Islander marketplace firm data did not allow for a proper analysis.
- ◆ Data for nonminority female firms (disparity index of 45.68) were substantially and significantly underutilized, accounting for 30.95 percent of all firms and 14.14 percent of sales.

TABLE 5-4.
PRIVATE SECTOR CENSUS DISPARITIES
NAICS CODE 56, ADMINISTRATIVE AND SUPPORT/WASTE MANAGEMENT AND REMEDIATION SERVICES
U.S. CENSUS 2012 SURVEY OF BUSINESS OWNERS,
WSSC WATER MARKETPLACE

BUSINESS OWNERSHIP CLASSIFICATION	ALL FIRMS ¹ (#)	ALL FIRMS, SALES ² (\$1,000)	EMPLOYER FIRMS (#)	EMPLOYER FIRMS SALES (\$1,000)
All Firms	62,972	29,311,479	10,857	28,115,370
Nonminority Male	29,049	25,852,801	8,372	25,192,706
African American	15,181	1,424,063	983	1,236,071
American Indian and Alaska Native	523	13,767	49	0
Asian	3,958	806,483	518	705,232
Hispanic ⁴	14,261	1,214,365	935	981,361
Native Hawaiian and Other Pacific Islander	N/A	N/A	N/A	N/A
Nonminority Female	33,252	4,507,356	3,360	3,975,082
PERCENTAGE OF MARKETPLACE				
All Firms	100.00%	100.00%	100.00%	100.00%
Nonminority Male	46.13%	88.20%	77.11%	89.60%
African American	24.11%	4.86%	9.05%	4.40%
American Indian and Alaska Native	0.83%	0.05%	0.45%	0.00%
Asian	6.29%	2.75%	4.77%	2.51%
Hispanic ⁴	22.65%	4.14%	8.61%	3.49%
Native Hawaiian and Other Pacific Islander	N/A	N/A	N/A	N/A
Nonminority Female	52.80%	15.38%	30.95%	14.14%
DISPARITY RATIOS ³				
All Firms		100.00		100.00
Nonminority Male		191.20		116.20
African American		20.15		48.56
American Indian and Alaska Native		5.66		0.00
Asian		43.78		52.57
Hispanic ⁴		18.29		40.53
Native Hawaiian and Other Pacific Islander		N/A		N/A
Nonminority Female		29.12		45.68

Source: MGT Consulting Group, LLC conducted private sector disparities marketplace analyses based on U.S. Census Bureau, 2012 Survey of Business Owners (SBO) data.

¹Firms include employer and nonemployer firms since nonemployer firms can provide services at the subcontractor/subconsultant level and hire independent contractors to increase capacity. Employer firms include firms with payroll at any time during 2012.

²Sales includes total shipments, receipts, revenue, or business done by the firm.

³Disparity index is the ratio of the percentage of sales to the percentage of available firms multiplied by 100.00. A disparity index below 80.00 indicates a substantial level of disparity.

⁴Hispanic firms are considered an ethnicity in this Census data and therefore may be double counted in race categories, which leads to percentages equaling greater than 100%.

N/A Denotes that there were no firms or sales for the classification.

Disparity results are statistically significant within a 95 percent confidence interval.

NAICS Code 81: Other Services (Except Public Administration), WSSC Water Marketplace

Table 5-5 shows the availability, sales, and disparity results for NAICS Code other services (except public administration) (NAICS Code 81).

There were a total of 88,456 other services (except public administration) firms (all firms) in the WSSC Water marketplace in 2012.

- ◆ African American firms (disparity index of 21.27) were substantially and significantly underutilized, accounting for 31.69 percent of all firms and 6.74 percent of sales.
- ◆ American Indian and Alaska Native firms (disparity index of 13.32) were substantially and significantly underutilized, accounting for 0.72 percent of all firms and 0.10 percent of sales.
- ◆ Asian American firms (disparity index of 69.36) were substantially and significantly underutilized, accounting for 18.77 percent of all firms and 13.02 percent of sales.
- ◆ Hispanic American firms (disparity index of 35.48) were substantially and significantly underutilized, accounting for 9.82 percent of all firms and 3.48 percent of sales.
- ◆ Native Hawaiian or Pacific Islander marketplace firm data did not allow for a proper analysis.
- ◆ Data for nonminority female firms (disparity index of 47.42) were substantially and significantly underutilized, accounting for 59.58 percent of all firms and 28.25 percent of sales.

There were 10,147 other services (except public administration) employer firms in the WSSC Water marketplace in 2012.

- ◆ African American firms (disparity index of 39.15) were substantially and significantly underutilized, accounting for 5.10 percent of all firms and 1.99 percent of sales.
- ◆ American Indian and Alaska Native firms (disparity index of 0.00) were substantially and significantly underutilized, accounting for 0.26 percent of all firms and 0.00 percent of sales.
- ◆ Asian American firms (disparity index of 44.53) were substantially and significantly underutilized, accounting for 23.90 percent of all firms and 10.64 percent of sales.
- ◆ Hispanic American firms (disparity index of 30.97) were substantially and significantly underutilized, accounting for 3.75 percent of all firms and 1.16 percent of sales.
- ◆ Native Hawaiian or Pacific Islander marketplace firm data did not allow for a proper analysis.
- ◆ Data for nonminority female firms (disparity index of 49.96) were substantially and significantly underutilized, accounting for 42.49 percent of all firms and 21.23 percent of sales.

TABLE 5-5.
PRIVATE SECTOR CENSUS DISPARITIES
NAICS CODE 81, OTHER SERVICES (EXCEPT PUBLIC ADMINISTRATION)
U.S. CENSUS 2012 SURVEY OF BUSINESS OWNERS,
WSSC WATER MARKETPLACE

BUSINESS OWNERSHIP CLASSIFICATION	ALL FIRMS ¹ (#)	ALL FIRMS, SALES ² (\$1,000)	EMPLOYER FIRMS (#)	EMPLOYER FIRMS SALES (\$1,000)
All Firms	88,456	9,556,848	10,147	7,466,564
Nonminority Male	34,506	7,326,574	6,798	6,436,192
African American	28,028	644,027	517	148,920
American Indian and Alaska Native	633	9,108	26	0
Asian	16,603	1,244,200	2,425	794,617
Hispanic ⁴	8,686	332,939	381	86,835
Native Hawaiian and Other Pacific Islander	N/A	N/A	N/A	N/A
Nonminority Female	52,703	2,700,092	4,311	1,584,982
PERCENTAGE OF MARKETPLACE				
All Firms	100.00%	100.00%	100.00%	100.00%
Nonminority Male	39.01%	76.66%	67.00%	86.20%
African American	31.69%	6.74%	5.10%	1.99%
American Indian and Alaska Native	0.72%	0.10%	0.26%	0.00%
Asian	18.77%	13.02%	23.90%	10.64%
Hispanic ⁴	9.82%	3.48%	3.75%	1.16%
Native Hawaiian and Other Pacific Islander	N/A	N/A	N/A	N/A
Nonminority Female	59.58%	28.25%	42.49%	21.23%
DISPARITY RATIOS ³				
All Firms		100.00		100.00
Nonminority Male		196.53		128.67
African American		21.27		39.15
American Indian and Alaska Native		13.32		0.00
Asian		69.36		44.53
Hispanic ⁴		35.48		30.97
Native Hawaiian and Other Pacific Islander		N/A		N/A
Nonminority Female		47.42		49.96

Source: MGT Consulting Group, LLC conducted private sector disparities marketplace analyses based on U.S. Census Bureau, 2012 Survey of Business Owners (SBO) data.

¹Firms include employer and nonemployer firms since nonemployer firms can provide services at the subcontractor/subconsultant level and hire independent contractors to increase capacity. Employer firms include firms with payroll at any time during 2012.

²Sales includes total shipments, receipts, revenue, or business done by the firm.

³Disparity index is the ratio of the percentage of sales to the percentage of available firms multiplied by 100.00. A disparity index below 80.00 indicates a substantial level of disparity.

⁴Hispanic firms are considered an ethnicity in this Census data and therefore may be double counted in race categories, which leads to percentages equaling greater than 100%.

N/A Denotes that there were no firms or sales for the classification.

Disparity results are statistically significant within a 95 percent confidence interval.

5.2.3 SBO Conclusion

The SBO analysis shows consistent underutilization of M/WBE firms relative to their availability in the marketplace. The results suggest that disparities exist in the broader private sector in which WSSC Water conducts business and supports the idea that WSSC Water should maintain remedies to avoid passive participation in discrimination, irrespective of circumstances in the public sector.

Furthermore, the five procurement categories analyzed showed substantial and statistically significant disparities among defined M/WBE classes where sufficient data were available.

5.3 Private Sector Disparities in ABS Census Data

As described above, SBO data is a vital resource in helping to answer the overarching research question regarding the existence of disparities in the private sector and the specific question of whether these disparities exist in procurement categories relevant to the WSSC Water contracting domain. A limitation with the SBO data is, of course, its age. In 2017, the Census Bureau replaced the SBO data with the American Business Survey (ABS)⁴³. Essentially this dataset is the same as the SBO with one caveat. ABS data no longer provides information for all firms, only employer firms. This data is still valuable for determining more recent private sector disparities, but it excludes a sector usually dominated by smaller businesses that are the beneficiary of any M/WBE program.

As with the SBO data, ABS gathers and reports data on firms with paid employees, including workers on the payroll (employer firms). MGT calculated private sector disparity indices to examine whether M/WBE firms in any of these categories received a proportionate share of sales based on the availability of M/WBE firms. Disparity indices were reviewed for employer firms. It should be noted that all of the disparity indices in the ABS tables are statistically significant within a **95 percent** confidence interval. The same NAICS codes as the SBO analysis were analyzed for the ABS data and the same marketplace.

5.3.1 Results of Analysis

Tables 5-6 through **5-10** show the measures of private sector disparities based on U.S. Census 2017 ABS data for the population of available firms in the WSSC Water marketplace by race, ethnicity, and gender for construction; wholesale trade; professional, scientific, and technical services; administrative and support and waste management and remediation services; and other services (except public administration).

Based on the analysis of the U.S. Census, 2017 ABS data, overall, there remains a significant gap between the market share of M/WBE firms and their share of the WSSC Water marketplace business population, where data was available.

⁴³ These represent the most recent available data provided through the ABS program and were released in 2019.

NAICS Code 23: Construction, WSSC Water Marketplace

Table 5-6 shows the construction availability, sales, and disparity results (NAICS Code 23).

There were 18,317 construction employer firms⁴⁴ in the WSSC Water marketplace in 2017.

- ◆ African American firms (disparity index of 60.39) were substantially and significantly underutilized, accounting for 2.56 percent of all firms and 1.54 percent of sales.
- ◆ American Indian and Alaska Native firms (disparity index of 45.49) were substantially and significantly underutilized, accounting for 0.29 percent of all firms and 0.13 percent of sales.
- ◆ Asian American firms (disparity index of 45.47) were substantially and significantly underutilized, accounting for 3.23 percent of all firms and 1.47 percent of sales.
- ◆ Hispanic American firms (disparity index of 30.68) were substantially and significantly underutilized, accounting for 11.78 percent of all firms and 3.61 percent of sales.
- ◆ Native Hawaiian and Pacific Islander firm data did not allow for a proper analysis.
- ◆ Data for nonminority female firms (disparity index of 51.41) were substantially and significantly underutilized, accounting for 13.28 percent of all firms and 6.83 percent of sales.

⁴⁴ Employer firms include firms with payroll at any time during 2017.

TABLE 5-6.
PRIVATE SECTOR CENSUS DISPARITIES
NAICS CODE 23, CONSTRUCTION
U.S. CENSUS 2017 ANNUAL BUSINESS SURVEY,
WSSC WATER MARKETPLACE

BUSINESS OWNERSHIP CLASSIFICATION	EMPLOYER FIRMS (#)	EMPLOYER FIRMS SALES (\$1,000)
All Firms	18,317	63,140,001
Nonminority Male	12,614	54,562,202
African American	468	974,283
American Indian and Alaska Native	53	83,101
Asian	592	927,958
Hispanic ⁴	2,158	2,282,485
Native Hawaiian and Other Pacific Islander	N/A	N/A
Nonminority Female	2,432	4,309,972
PERCENTAGE OF MARKETPLACE		
All Firms	100.00%	100.00%
Nonminority Male	68.86%	86.41%
African American	2.56%	1.54%
American Indian and Alaska Native	0.29%	0.13%
Asian	3.23%	1.47%
Hispanic ⁴	11.78%	3.61%
Native Hawaiian and Other Pacific Islander	N/A	N/A
Nonminority Female	13.28%	6.83%
DISPARITY RATIOS ³		
All Firms		100.00
Nonminority Male		125.48
African American		60.39
American Indian and Alaska Native		45.49
Asian		45.47
Hispanic ⁴		30.68
Native Hawaiian and Other Pacific Islander		N/A
Nonminority Female		51.41

Source: MGT Consulting Group, LLC conducted private sector disparities marketplace analyses based on U.S. Census Bureau, 2017 Annual Business Survey (ABS) data.

¹ Employer firms include firms with payroll at any time during 2017.

² Sales includes total shipments, receipts, revenue, or business done by the firm.

³ Disparity index is the ratio of the percentage of sales to percentage of available firms multiplied by 100.00. A disparity index below 80.00 indicates a substantial level of disparity.

⁴ Hispanic firms are considered an ethnicity in this Census data and therefore may be double counted in race categories, which leads to percentages equaling greater than 100%.

N/A Denotes that there were no firms or sales for the classification.

Disparity results are statistically significant within a 95 percent confidence interval.

NAICS Code 42: Wholesale Trade, WSSC Water Marketplace

Table 5-7 shows wholesale trade availability, sales, and disparity results (NAICS Code 42).

There were 4,831 wholesale trade employer firms in the WSSC Water marketplace in 2017.

- ◆ African American firms (disparity index of 64.94) were substantially and significantly underutilized, accounting for 1.43 percent of all firms and 0.93 percent of sales.
- ◆ American Indian and Alaska Native firm data did not allow for a proper analysis.
- ◆ Asian American firms (disparity index of 19.96) were substantially and significantly underutilized, accounting for 9.42 percent of all firms and 1.88 percent of sales.
- ◆ Hispanic American firms' data did not allow for a proper analysis.
- ◆ Native Hawaiian and Pacific Islander firm data did not allow for a proper analysis.
- ◆ Data for nonminority female firms (disparity index of 26.99) were substantially and significantly underutilized, accounting for 19.79 percent of all firms and 5.34 percent of sales.

TABLE 5-7.
PRIVATE SECTOR CENSUS DISPARITIES
NAICS CODE 42, WHOLESALE TRADE
U.S. CENSUS 2017 ANNUAL BUSINESS SURVEY,
WSSC WATER MARKETPLACE

BUSINESS OWNERSHIP CLASSIFICATION	EMPLOYER FIRMS (#)	EMPLOYER FIRMS SALES (\$1,000)
All Firms	4,831	89,512,950
Nonminority Male	3,351	82,219,088
African American	69	830,270
American Indian and Alaska Native	N/A	N/A
Asian	455	1,683,060
Hispanic ⁴	N/A	N/A
Native Hawaiian and Other Pacific Islander	N/A	N/A
Nonminority Female	956	4,780,532
PERCENTAGE OF MARKETPLACE		
All Firms	100.00%	100.00%
Nonminority Male	69.36%	91.85%
African American	1.43%	0.93%
American Indian and Alaska Native	N/A	N/A
Asian	9.42%	1.88%
Hispanic ⁴	N/A	N/A
Native Hawaiian and Other Pacific Islander	N/A	N/A
Nonminority Female	19.79%	5.34%
DISPARITY RATIOS³		
All Firms		100.00
Nonminority Male		132.42
African American		64.94
American Indian and Alaska Native		N/A
Asian		19.96
Hispanic ⁴		N/A
Native Hawaiian and Other Pacific Islander		N/A
Nonminority Female		26.99

Source: MGT Consulting Group, LLC conducted private sector disparities marketplace analyses based on U.S. Census Bureau, 2017 Annual Business Survey (ABS) data.

¹ Employer firms include firms with payroll at any time during 2017.

² Sales includes total shipments, receipts, revenue, or business done by the firm.

³ Disparity index is the ratio of the percentage of sales to the percentage of available firms multiplied by 100.00. A disparity index below 80.00 indicates a substantial level of disparity.

⁴ Hispanic firms are considered an ethnicity in this Census data and therefore may be double counted in race categories, which leads to percentages equaling greater than 100%.

N/A Denotes that there were no firms or sales for the classification.

Disparity results are statistically significant within a 95 percent confidence interval.

NAICS Code 54: Professional, Scientific, and Technical Services, WSSC Water Marketplace

Table 5-8 shows the availability, sales, and disparity results for professional, scientific, and technical services (NAICS Code 54).

There was a total of 45,338 professional, scientific, and technical services employer firms in the WSSC Water marketplace in 2017.

- ◆ African American firms (disparity index of 54.71) were substantially and significantly underutilized, accounting for 4.05 percent of all firms and 2.21 percent of sales.
- ◆ American Indian and Alaska Native firms (disparity index of 50.33) were substantially and significantly underutilized, accounting for 0.42 percent of all firms and 0.21 percent of sales.
- ◆ Asian American firms (disparity index of 57.61) were substantially and significantly underutilized, accounting for 11.45 percent of all firms and 6.60 percent of sales.
- ◆ Hispanic American firms (disparity index of 66.52) were substantially and significantly underutilized, accounting for 2.32 percent of all firms and 1.55 percent of sales.
- ◆ Native Hawaiian and Pacific Islander firm data not allow for a proper analysis.
- ◆ Data for nonminority female firms (disparity index of 42.37) were substantially and significantly underutilized, accounting for 20.02 percent of all firms and 8.48 percent of sales.

TABLE 5-8.
PRIVATE SECTOR CENSUS DISPARITIES
NAICS CODE 54, PROFESSIONAL, SCIENTIFIC, AND TECHNICAL SERVICES
U.S. CENSUS 2017 ANNUAL BUSINESS SURVEY,
WSSC WATER MARKETPLACE

BUSINESS OWNERSHIP CLASSIFICATION	EMPLOYER FIRMS (#)	EMPLOYER FIRMS SALES (\$1,000)
All Firms	45,338	174,924,359
Nonminority Male	27,992	141,602,602
African American	1,834	3,871,042
American Indian and Alaska Native	191	370,908
Asian	5,191	11,538,899
Hispanic ⁴	1,053	2,702,714
Native Hawaiian and Other Pacific Islander	N/A	N/A
Nonminority Female	9,077	14,838,194
PERCENTAGE OF MARKETPLACE		
All Firms	100.00%	100.00%
Nonminority Male	61.74%	80.95%
African American	4.05%	2.21%
American Indian and Alaska Native	0.42%	0.21%
Asian	11.45%	6.60%
Hispanic ⁴	2.32%	1.55%
Native Hawaiian and Other Pacific Islander	N/A	N/A
Nonminority Female	20.02%	8.48%
DISPARITY RATIOS ³		
All Firms		100.00
Nonminority Male		131.11
African American		54.71
American Indian and Alaska Native		50.33
Asian		57.61
Hispanic ⁴		66.52
Native Hawaiian and Other Pacific Islander		N/A
Nonminority Female		42.37

Source: MGT Consulting Group, LLC conducted private sector disparities marketplace analyses based on U.S. Census Bureau, 2017 Annual Business Survey (ABS) data.

¹ Employer firms include firms with payroll at any time during 2017.

² Sales includes total shipments, receipts, revenue, or business done by the firm.

³ Disparity index is the ratio of the percentage of sales to the percentage of available firms multiplied by 100.00. A disparity index below 80.00 indicates a substantial level of disparity.

⁴ Hispanic firms are considered an ethnicity in this Census data and therefore may be double counted in race categories, which leads to percentages equaling greater than 100%.

N/A Denotes that there were no firms or sales for the classification.

Disparity results are statistically significant within a 95 percent confidence interval.

NAICS Code 56: Administrative and Support and Waste Management and Remediation Services, WSSC Water Marketplace

Table 5-9 shows the availability, sales, and disparity results for administrative and support and waste management and remediation services (NAICS Code 56).

There were 12,150 administrative and support and waste management and remediation services employer firms in the WSSC Water marketplace in 2017.

- ◆ African American firms (disparity index of 75.11) were substantially and significantly underutilized, accounting for 5.65 percent of all firms and 4.24 percent of sales.
- ◆ American Indian and Alaska Native firms (disparity index of 17.60) were substantially and significantly underutilized, accounting for 0.63 percent of all firms and 0.11 percent of sales.
- ◆ Asian American firms (disparity index of 78.30) were substantially and significantly underutilized, accounting for 3.27 percent of all firms and 2.56 percent of sales.
- ◆ Hispanic American firms (disparity index of 51.00) were substantially and significantly underutilized, accounting for 8.95 percent of all firms and 4.56 percent of sales.
- ◆ Native Hawaiian and Pacific Islander marketplace firm data did not allow for a proper analysis.
- ◆ Data for nonminority female firms (disparity index of 66.23) were substantially and significantly underutilized, accounting for 19.84 percent of all firms and 13.14 percent of sales.

TABLE 5-9.
PRIVATE SECTOR CENSUS DISPARITIES
NAICS CODE 56, ADMINISTRATIVE AND SUPPORT/WASTE MANAGEMENT AND REMEDIATION SERVICES
U .S. CENSUS 2017 ANNUAL BUSINESS SURVEY,
WSSC WATER MARKETPLACE

BUSINESS OWNERSHIP CLASSIFICATION	EMPLOYER FIRMS (#)	EMPLOYER FIRMS SALES (\$1,000)
All Firms	12,150	33,094,401
Nonminority Male	7,493	24,948,748
African American	686	1,403,376
American Indian and Alaska Native	76	36,427
Asian	397	846,652
Hispanic ⁴	1,087	1,510,001
Native Hawaiian and Other Pacific Islander	N/A	N/A
Nonminority Female	2,411	4,349,197
PERCENTAGE OF MARKETPLACE		
All Firms	100.00%	100.00%
Nonminority Male	61.67%	75.39%
African American	5.65%	4.24%
American Indian and Alaska Native	0.63%	0.11%
Asian	3.27%	2.56%
Hispanic ⁴	8.95%	4.56%
Native Hawaiian and Other Pacific Islander	N/A	N/A
Nonminority Female	19.84%	13.14%
DISPARITY RATIOS ³		
All Firms		100.00
Nonminority Male		122.24
African American		75.11
American Indian and Alaska Native		17.60
Asian		78.30
Hispanic ⁴		51.00
Native Hawaiian and Other Pacific Islander		N/A
Nonminority Female		66.23

Source: MGT Consulting Group, LLC conducted private sector disparities marketplace analyses based on U.S. Census Bureau, 2017 Annual Business Survey (ABS) data.

¹ Employer firms include firms with payroll at any time during 2017.

² Sales includes total shipments, receipts, revenue, or business done by the firm.

³ Disparity index is the ratio of the percentage of sales to percentage of available firms multiplied by 100.00. A disparity index below 80.00 indicates a substantial level of disparity.

⁴ Hispanic firms are considered an ethnicity in this Census data and therefore may be double counted in race categories, which leads to percentages equaling greater than 100%.

N/A Denotes that there were no firms or sales for the classification.

Disparity results are statistically significant within a 95 percent confidence interval.

NAICS Code 81: Other Services (Except Public Administration), WSSC Water Marketplace

Table 5-10 shows the availability, sales, and disparity results for NAICS Code other services (except public administration) (NAICS Code 81).

There were 13,744 other services (except public administration) employer firms in the WSSC Water marketplace in 2017.

- ◆ African American firms (disparity index of 55.43) were substantially and significantly underutilized, accounting for 3.30 percent of all firms and 1.83 percent of sales.
- ◆ American Indian and Alaska Native marketplace firm data was minimal and therefore did not allow for a proper analysis.
- ◆ Asian American firms (disparity index of 74.35) were substantially and significantly underutilized, accounting for 16.28 percent of all firms and 12.10 percent of sales.
- ◆ Hispanic American firms (disparity index of 55.87) were substantially and significantly underutilized, accounting for 3.56 percent of all firms and 1.99 percent of sales.
- ◆ Native Hawaiian or Pacific Islander marketplace firm data did not allow for a proper analysis.
- ◆ Data for nonminority female firms (disparity index of 75.37) were substantially and significantly underutilized, accounting for 23.27 percent of all firms and 17.54 percent of sales.

TABLE 5-10.
PRIVATE SECTOR CENSUS DISPARITIES
NAICS CODE 81, OTHER SERVICES (EXCEPT PUBLIC ADMINISTRATION)
U.S. CENSUS 2017 ANNUAL BUSINESS SURVEY,
WSSC WATER MARKETPLACE

BUSINESS OWNERSHIP CLASSIFICATION	EMPLOYER FIRMS (#)	EMPLOYER FIRMS SALES (\$1,000)
All Firms	13,744	9,240,153
Nonminority Male	7,366	6,148,649
African American	454	169,178
American Indian and Alaska Native	N/A	N/A
Asian	2,237	1,118,173
Hispanic ⁴	489	183,687
Native Hawaiian and Other Pacific Islander	N/A	N/A
Nonminority Female	3,198	1,620,466
PERCENTAGE OF MARKETPLACE		
All Firms	100.00%	100.00%
Nonminority Male	53.59%	66.54%
African American	3.30%	1.83%
American Indian and Alaska Native	N/A	N/A
Asian	16.28%	12.10%
Hispanic ⁴	3.56%	1.99%
Native Hawaiian and Other Pacific Islander	N/A	N/A
Nonminority Female	23.27%	17.54%
DISPARITY RATIOS ³		
All Firms		100.00
Nonminority Male		124.16
African American		55.43
American Indian and Alaska Native		N/A
Asian		74.35
Hispanic ⁴		55.87
Native Hawaiian and Other Pacific Islander		N/A
Nonminority Female		75.37

Source: MGT Consulting Group, LLC conducted private sector disparities marketplace analyses based on U.S. Census Bureau, 2017 Annual Business Survey (ABS) data.

¹ Employer firms include firms with payroll at any time during 2017.

² Sales includes total shipments, receipts, revenue, or business done by the firm.

³ Disparity index is the ratio of the percentage of sales to the percentage of available firms multiplied by 100.00. A disparity index below 80.00 indicates a substantial level of disparity.

⁴ Hispanic firms are considered an ethnicity in this Census data and therefore may be double counted in race categories, which leads to percentages equaling greater than 100%.

N/A Denotes that there were no firms or sales for the classification.

Disparity results are statistically significant within a 95 percent confidence interval.

5.3.2 ABS Conclusion

Like the SBO analysis, the ABS analysis shows consistent underutilization of M/WBE firms relative to their availability in the marketplace. These results provide evidence that disparities exist in the broader private sector, thus supporting the need for WSSC Water to maintain remedies to avoid passive participation in discrimination, irrespective of circumstances in the public sector.

As with the SBO results, the ABS results for each of the five procurement categories analyzed showed substantial disparity among defined M/WBE classes where sufficient data were available.

5.4 Analysis of Race, Ethnicity, and Gender Effects on Self-Employment and Earnings

This section examines further evidence regarding the overarching research question of whether business discrimination exists in the private sector and addresses three more specific questions:

1. *Does racial, ethnic, and gender status impact individual wages even after controlling for differences among firms?*
2. *Does racial, ethnic and gender status impact business owner earnings even after controlling for differences among firms?*
3. *Are racial, ethnic, and gender minority groups less likely than nonminority males (non-M/WBEs) to be self-employed after controlling for differences? If so, does race, ethnicity, or gender have a role in the disparity?*
4. *If minority and female-owned business enterprises (M/WBEs) and nonminority male-owned firms shared similar traits and marketplace “conditions” (i.e., similar “rewards” in terms of capital, wages, earning, etc.), what would be the effect on rates of self-employment by race, ethnicity, and gender?*

Answers to these questions are achieved by examining the effects of race, ethnicity, and gender, alongside controls for individual economic and demographic characteristics, on individuals’ participation in the private sector as self-employed business operators and the effects of these variables on individuals’ wages and business-owner earnings. Any negative and statistically significant effects by race, ethnicity, and gender found in the model after individual economic and demographic characteristics are controlled for would be consistent with business-related discrimination. The analysis is targeted to five categories of private sector business activity (Construction, Architecture & Engineering, Professional Services, Goods & Services, and all categories combined) that generally align with WSSC Water procurement categories defined for the study.

Adopting the methodology and variables employed by a City of Denver disparity study (see *Concrete Works v. City and County of Denver*⁴⁵), MGT used Public Use Microdata Samples (PUMS) data derived from the 2015-2019 American Community Survey (ACS) to which MGT applied appropriate regression statistics to draw conclusions. The ACS is an ongoing survey covering the same type of information collected in the decennial census. The ACS is sent to approximately 3.5 million addresses annually, including housing units in all counties within the 50 States and the District of Columbia. The PUMS file from the ACS contains

⁴⁵ *Concrete Works of Colo. v. City & Cnty. of Denver*, 321 F.3d 950, 967 (10th Cir. 2003).

records for a subsample of the full ACS. The data used for the regression analyses are the multi-year estimates combining 2014 through 2019 ACS PUMS records. The combined file contains over six million person-level records. The 2014-2019 ACS PUMS data provides a full range of population and housing information collected in the annual ACS and the decennial census.

5.4.1 Links to Business Formation and Maintenance

Economics research consistently finds group differences by race, ethnicity, and gender in business formation rates.⁴⁶ MGT knows, for instance, that most minorities and females have a lower median age than nonminority males (ACS PUMS, 2015-2019). In general, the likelihood of being self-employed increases with age (ACS PUMS, 2015-2019). An examination of these variables within the context of a disparity study seeks to control for these other important demographic and economic variables in conjunction with race, ethnicity, and gender – since they also influence group rates of business formation. Through the analyses, MGT can determine whether inequities specific to minorities and females are demonstrably present to warrant consideration of public sector remedies. Questions about marketplace dynamics affecting self-employment— or, more specifically, the odds of forming one’s own business and then excelling (i.e., generate earnings growth)— are at the heart of disparity analysis research.

5.4.2 Statistical Models and Methods

MGT employed two multivariate regression techniques to answer the research questions identified for this section: (1) logistic regression and (2) linear regression. Logistic regression is an econometric method that allows for analyzing dichotomous dependent variables. The results can then be translated into log-likelihoods that examine how likely one variable is to be true compared to another variable. Linear regression is an econometric method that helps explain the linear relationship between the dependent and independent variables – how substantially and in what direction each independent variable influences the dependent variable. This will help analyze the direct impact of being part of a specific minority or gender group on earnings.

To understand the appropriate application of these regression techniques, it is helpful to explore the variables inherent in these questions in greater detail. There are two general categories of variables employed in the regression techniques: (1) dependent variables and (2) independent variables.

- ◆ Dependent variables are the phenomena to be explained by influences such as age, race, gender, and disability status (i.e., the independent or “explanatory” variables).
- ◆ The first dependent variable is individual wages, a continuous variable with many possible values. A simple linear regression is used to analyze this variable.
- ◆ The second dependent variable is self-employment business earnings, a continuous variable with many possible values. A simple linear regression is used to analyze this variable.

⁴⁶ See Journal of Econometrics, Vol. 61, Issue 1, devoted entirely to the econometrics of labor market discrimination and segregation.

- ◆ The third dependent variable is the probability of self-employment status, which is a binary, categorical variable based on two possible values: 0 (not self-employed) versus 1 (self-employed). Logistic regression is appropriately used to perform an analysis in which the dependent variable is binary and categorical. This technique was employed to analyze self-employment.⁴⁷
- ◆ For each analysis, several specifications were conducted. The first specification looked at the impact of race, ethnicity, and gender on individuals from the national level. The second and third specifications examined whether race, ethnicity, and gender significantly impacted individuals in the WSSC Water market more than at the national level. The results presented in this chapter are specific to the WSSC Water marketplace. Full specification results can be found in **Appendix D**.

5.4.3 The Influences of Race, Ethnicity, and Gender on Individual Wages

To explore whether there are any measurable impacts on wages, MGT compared minority and female nonbusiness owner wages to those of nonminority males in the WSSC Water marketplace when the effect of other demographic and economic characteristics was controlled. Holding all other personal characteristics constant, if minority and female wage earners cannot achieve comparable wages due to discrimination as their nonminority counterparts, then they are not able to save the necessary capital to start their own businesses. MGT was able to examine the wages of individuals of similar education levels, ages, etc., to permit comparisons more purely by race, ethnicity, and gender.

First, MGT derived a set of independent variables known to predict wages, including:

- ◆ ***Race and Gender:*** African American, Asian American, Hispanic American, Native American, nonminority woman, nonminority males.
- ◆ ***Availability of Capital:*** Homeownership, home value, mortgage rate, unearned income, residual income.
- ◆ ***Marital Status.***
- ◆ ***Ability to Speak English Well.***
- ◆ ***Disability Status:*** From individuals' reports of health-related disabilities.
- ◆ ***Age and Age Squared:*** Squaring the age variable acknowledges the positive, curvilinear relationship between each year of age and earnings.
- ◆ ***Owner's Level of Education.***
- ◆ ***Residing in the WSSC Water Marketplace.***

⁴⁷ Logistical regression, or logit, models generate predicted probabilities that are almost identical to those calculated by a probit procedure, used in *Concrete Works v. City and County of Denver* case. Logit, however, has the added advantage of dealing more effectively with observations at the extremes of a distribution. For a complete explanation, see *Interpreting Probability Models* (T.F. Liao, Text 101 in the Sage University series).

MGT used 2015-2019 wages from employment for the dependent variable, as reported in the 5 percent PUMS data.

This analysis examined the statistical effects of these variables on wages for nonbusiness employees in the WSSC Water marketplace. As the linear regression analysis yielded, each number in **Table 5-11** represents a percent change in earnings associated with introducing the variable (business ownership classification) in the left-hand column. For example, across all industries, the adjustment factor for an African American is -0.353, meaning that an African American would be predicted to earn 35 percent less than a nonminority male, all other variables considered or controlled for. Complete results of linear regression outputs can be found in **Appendix D**. Specifically:

- ◆ In construction, the negative disparity differences ranged from -10 percent for Hispanic Americans to -35 percent for nonminority females.
- ◆ In architecture & engineering, the negative disparity differences ranged from -13 percent for Asian Americans to -35 percent for Native Americans.
- ◆ In professional services, the negative disparity differences ranged from -14 percent for Hispanic Americans to -46 percent for Asian Americans.
- ◆ In goods & services, the negative disparity differences ranged from -17 percent for Hispanic Americans to -35 percent for nonminority females.

The findings provide further positive evidence that disparities exist in the private sector of WSSC Water’s marketplace, compelling the continuation of remedies in the domain of the government’s influence. The findings also provide affirmative evidence to the more specific questions regarding impacts on wages, demonstrating that racial, ethnic, and gender minority groups earn less wages than their nonminority male counterparts, all variables considered.

TABLE 5-11.
WAGES ELASTICITIES OF MINORITY GROUPS RELATIVE TO NONMINORITY MALES AFTER CONTROLLING FOR DEMOGRAPHIC AND ECONOMIC CHARACTERISTICS

WAGES	TOTAL	CONSTRUCTION	A&E	PROFESSIONAL SERVICES	GOODS & SERVICES
AFRICAN AMERICAN	-35%***	-33%***	-27%***	-42%***	-32%***
ASIAN AMERICAN	-20%***	-12%***	-13%***	-46%***	-27%***
HISPANIC AMERICAN	-17%***	-10%***	-25%***	-14%***	-7%***
NATIVE AMERICAN	-29%***	-29%***	-35%***	-37%***	-28%***
MBE	-26%***	-21%***	-23%***	-36%***	-26%***
NONMINORITY FEMALE	-36%***	-35%***	-32%***	-32%***	-35%***
TOTAL M/WBE	-28%***	-24%***	-27%***	-35%***	-28%***

Source: PUMS data from 2015-2019 American Community Survey (WSSC Water marketplace) and MGT Consulting Group, LLC, calculations using SPSS Statistics software.

“*” indicates a significant adverse disparity at the 15% level or better (85% confidence). “***” indicates the disparity is significant at a 10% level or better (90% confidence). “****” indicates significance at a 5% level or better (95% confidence).

The regression “elasticity” means the percent change resulting from being a member of one of the M/WBE groups.

5.4.4 The Influences of Race, Ethnicity, and Gender on Business Owner Earnings

To explore whether there are any measurable impacts on business owner earnings, MGT compared minority and female business owner earnings to those of nonminority males in the WSSC Water marketplace when the effect of other demographic and economic characteristics was controlled or neutralized. Holding all other personal characteristics constant, if minority and female business owners cannot achieve comparable earnings from their businesses as similarly situated nonminorities because of discrimination, then failure rates for M/WBEs will naturally be higher and M/WBE formation rates will be lower. MGT was able to examine the earnings of business owners of similar education levels, ages, etc., to permit comparisons more purely by race, ethnicity, and gender.

MGT utilized the same model specifications as outlined for wages in this linear regression model. MGT used the dependent variable's 2015-2019 earnings from business owners, as reported in the 5 percent PUMS data.

This analysis examined the statistical effects of the controlled variables on earnings for business owners in the WSSC Water marketplace. As the linear regression analysis yielded, each number in **Table 5-12** represents a percent change in earnings associated with introducing the variable (business ownership classification) in the left-hand column. For example, across all industries, the adjustment factor for an African American is -0.436, meaning that an African American would be predicted to earn 44 percent less than a nonminority male, all other variables considered or controlled for. Complete results of linear regression outputs can be found in **Appendix D**. Specifically:

- ◆ In construction, the negative disparity differences ranged from -10 percent for Hispanic Americans to -67 percent for nonminority females.
- ◆ In architecture & engineering, the negative disparity differences ranged from -20 percent for Hispanic Americans to -74 percent for African Americans.
- ◆ In professional services, the negative disparity differences ranged from -7 percent for Hispanic Americans to -62 percent for African Americans.
- ◆ In goods & services, the negative disparity differences ranged from -28 percent for Hispanic Americans to -57 percent for Asian Americans.

As with individual wages, business owner earnings overall in the WSSC Water marketplace provide consistent evidence that disparities exist in the private sector, indicating marketplace discrimination against M/WBEs when all other variables are controlled for.

TABLE 5-12.
BUSINESS EARNINGS ELASTICITIES OF MINORITY GROUPS RELATIVE TO NONMINORITY MALES AFTER
CONTROLLING FOR DEMOGRAPHIC AND ECONOMIC CHARACTERISTICS

BUSINESS EARNINGS	TOTAL	CONSTRUCTION	A&E	PROFESSIONAL SERVICES	GOODS & SERVICES
AFRICAN AMERICAN	-44%***	-38%***	-74%***	-62%***	-43%***
ASIAN AMERICAN	-19%***	117%	22%***	-22%*	-57%***
HISPANIC AMERICAN	-23%***	-10%***	-20%***	-7%	-28%***
NATIVE AMERICAN	-37%***	-23%***	-33%***	-33%***	-42%***
MBE	-31%***	-22%***	-26%***	-31%***	-42%***
NONMINORITY FEMALE	-33%***	-67%***	-24%***	-44%***	-46%***
TOTAL M/WBE	-31%***	-31%***	-26%***	-33%***	-43%***

Source: PUMS data from 2015-2019 American Community Survey (WSSC Water marketplace) and MGT Consulting Group, LLC, calculations using SPSS Statistics software.

“*” indicates an adverse disparity that is statistically significant at the 15% level or better (85% confidence). “**” indicates the disparity is significant at a 10% level or better (90% confidence). “***” indicates significance at a 5% level or better (95% confidence).

The regression “elasticity” means the percent change resulting from being a member of one of the M/WBE groups.

5.4.5 The Influences of Race, Ethnicity, and Gender on Self-Employment

As noted in the wages and business earnings analyses, discrimination that negatively affects the wages and entrepreneurial earnings of minorities and women will negatively affect the number of businesses formed by these groups as well. MGT used the 2015-2019 U.S. Census ACS 5 percent PUMS data to derive a set of variables known to predict employment status (self-employed/not self-employed). Logistic regression was used to calculate the probability of being self-employed (the dependent variable) based on selected socioeconomic and demographic characteristics with the potential to influence the likelihood of self-employment. The sample for the analysis was limited to labor force participants who met the following criteria:

- ◆ A resident of the WSSC Water marketplace.
- ◆ Self-employed in construction, architecture & engineering, professional services, or goods and services.
- ◆ Employed full-time (more than 35 hours a week).
- ◆ Eighteen years of age or older.
- ◆ Employed in the private sector.

Next, MGT derived the following variables⁴⁸ hypothesized as predictors of employment status:

- ♦ **Race and Gender:** African American, Asian American, Hispanic American, Native American, nonminority woman, nonminority male.
- ♦ **Availability of Capital:** Homeownership, home value, mortgage rate, unearned income, residual income.
- ♦ **Marital Status.**
- ♦ **Ability to Speak English Well.**
- ♦ **Disability Status:** From individuals’ reports of health-related disabilities.
- ♦ **Age and Age Squared:** Squaring the age variable acknowledges the positive, curvilinear relationship between each year of age and earnings.
- ♦ **Owner’s Level of Education.**
- ♦ **Number of Individuals Over the Age of 65 Living in Household.**
- ♦ **Number of Children Under the Age of 18 Living in Household.**

Table 5-13 summarizes the business ownership formation rates in the United States and in the WSSC Water marketplace by race, ethnicity, and gender. Additionally, it compares the differences in formation rates of M/WBEs to non-M/WBEs. As an example, African Americans in the WSSC Water marketplace have a formation rate of 6.25 percent compared to 11.59 percent for their non-M/WBE counterparts. Thus the formation rate for African Americans in the WSSC Water marketplaces is 46.07 percent lower than non-M/WBEs $((6.25 - 11.59)/11.59)$.

TABLE 5-13.
SELF-EMPLOYMENT FORMATION RATES

TOTALS			
	US	WSSC WATER	DIFFERENCE FROM NON-M/WBE (WSSC WATER)
AFRICAN AMERICAN	5.49%	6.25%	-46.07%
ASIAN AMERICAN	9.33%	11.03%	-4.77%
HISPANIC AMERICAN	9.08%	9.47%	-18.30%
NATIVE AMERICAN	8.46%	12.90%	11.33%
MBE	8.09%	8.29%	-28.43%
WHITE FEMALES	8.53%	9.32%	-19.58%
M/WBE	8.30%	8.64%	-25.46%
NON-M/WBE	12.05%	11.59%	

⁴⁸ The variables used in this analysis were modeled after those incorporated in the same analysis from *Concrete Works v. City and County of Denver*.

CONSTRUCTION			
	US	WSSC WATER	DIFFERENCE FROM NON-M/WBE (WSSC WATER)
AFRICAN AMERICAN	16.68%	12.31%	-43.24%
ASIAN AMERICAN	23.78%	32.84%	51.41%
HISPANIC AMERICAN	17.98%	14.22%	-34.44%
NATIVE AMERICAN	18.96%	22.35%	3.03%
MBE	18.16%	15.13%	-30.26%
WHITE FEMALES	15.84%	15.17%	-30.05%
M/WBE	17.74%	15.13%	-30.23%
NON-M/WBE	25.39%	21.69%	
A&E			
	US	WSSC WATER	DIFFERENCE FROM NON-M/WBE (WSSC WATER)
AFRICAN AMERICAN	5.97%	3.82%	-50.51%
ASIAN AMERICAN	6.25%	2.66%	-65.53%
HISPANIC AMERICAN	8.09%	5.64%	-26.98%
NATIVE AMERICAN	5.76%	0.00%	-100.00%
MBE	6.99%	3.89%	-49.69%
WHITE FEMALES	7.50%	4.54%	-41.25%
M/WBE	7.23%	4.16%	-46.15%
NON-M/WBE	11.36%	7.73%	
PROFESSIONAL SERVICES			
	US	WSSC WATER	DIFFERENCE FROM NON-M/WBE (WSSC WATER)
AFRICAN AMERICAN	9.78%	7.79%	-45.01%
ASIAN AMERICAN	9.00%	10.58%	-25.30%
HISPANIC AMERICAN	16.70%	11.98%	-15.43%
NATIVE AMERICAN	17.98%	25.90%	82.87%
MBE	12.93%	9.73%	-31.29%
WHITE FEMALES	17.17%	12.43%	-12.20%
M/WBE	14.85%	10.69%	-24.50%
NON-M/WBE	19.65%	14.16%	

GOODS & SERVICES			
	US	WSSC WATER	DIFFERENCE FROM NON-M/WBE (WSSC WATER)
AFRICAN AMERICAN	4.49%	5.68%	-36.21%
ASIAN AMERICAN	9.11%	10.80%	21.20%
HISPANIC AMERICAN	6.58%	7.17%	-19.51%
NATIVE AMERICAN	6.25%	8.63%	-3.17%
MBE	6.43%	7.21%	-19.06%
WHITE FEMALES	7.19%	8.34%	-6.43%
M/WBE	6.80%	7.60%	-14.70%
NON-M/WBE	8.70%	8.91%	

Source: PUMS data from 2015-2019 American Community Survey (WSSC Water marketplace) and MGT Consulting Group LLC, calculations using SPSS Statistics software.

To test the impact that race, ethnicity, and gender has on the self-employment rates, the logistics regression analysis examined the statistical effects of these variables on being self-employed in the WSSC Water marketplace. The results in **Table 5-14** indicate the percentage difference between the probability of business ownership for a given race, ethnicity, or gender group compared to similarly situated nonminority males. For example, African Americans in the construction industry have a business formation rate of 51 percent lower than expected in a race-, ethnicity-, and gender-neutral market area. The results in the following tables present rates for the groups after variables such as age and education have been controlled for. Results of logistic regression can be found in **Appendix D**.

TABLE 5-14.
SELF-EMPLOYMENT PERCENT DIFFERENCES CONTROLLING FOR DEMOGRAPHIC AND ECONOMIC CHARACTERISTICS

SELF-EMPLOYMENT PERCENT CHANGES	TOTAL	CONSTRUCTION	A&E	PROFESSIONAL SERVICES	GOODS & SERVICES
AFRICAN AMERICAN	-24%***	-51%***	-22%***	-137%***	-20%***
ASIAN AMERICAN	-8%***	61%***	-53%***	-81%***	24%*
HISPANIC AMERICAN	-13%***	-38%***	-19%***	-51%***	-16%
NATIVE AMERICAN	44%***	-42%***	3%***	-33%***	59%***
MBE	-15%***	-17%***	-23%***	-75%***	-18%***
NONMINORITY FEMALE	-3%***	-67%***	4%***	-13%***	-6%***
TOTAL M/WBE	-12%***	-27%***	-17%***	-63%***	-14%***

Source: PUMS data from 2015-2019 American Community Survey (WSSC Water marketplace) and MGT Consulting Group, LLC, calculations using SPSS Statistics software.

“*” indicates a significant adverse disparity at the 15% level or better (85% confidence). “***” indicates the disparity is significant at a 10% level or better (90% confidence). “****” indicates significance at a 5% level or better (95% confidence).

These findings demonstrate that minorities and women, in general, are statistically significantly less likely to own their businesses than expected based upon their observable demographic characteristics, including age, education, geographic location, industry, and trends over time. Additionally, as with wage and business earnings, these groups are at a significant disadvantage to nonminority males whether they work as wage and salary employees or as entrepreneurs. These findings are consistent with results that would be observed in a discriminatory market area.

5.4.6 Disparities in Rates of Self-Employment

The analyses of self-employment rates and 2015-2019 ACS self-employment earnings revealed general disparities, consistent with business market discrimination, between minority and nonminority self-employed individuals whose businesses were located in the WSSC Water marketplace. **Table 5-15** presents the results of observed formation rates vs. expected formation rates from the logistics regression. Column A presents the observed rates as seen in **Table 5-13**. Column B is calculated using the regression results and adjusting the observed rates accordingly. For example, for a Hispanic American in professional services, the percentage difference compared to a nonminority male controlling for all other variables is 51 percent, indicating that the expected self-employment rate for a Hispanic American should be 51 percent higher than what is observed (11.98 percent) or 18.07 percent. Column C is the disparity ratio between observed rates and expected rates.

TABLE 5-15.
OBSERVED AND PREDICTED SELF-EMPLOYMENT RATES
WSSC WATER MARKETPLACE

BUSINESS OWNERSHIP CLASSIFICATION	OBSERVED SELF-EMPLOYMENT RATES (A)	EXPECTED SELF-EMPLOYMENT RATES (B)	DISPARITY RATIO (C)
Overall			
African American Firms	6.25%	7.72%	81
Asian American Firms	11.03%	11.88%	93
Hispanic American Firms	9.47%	10.67%	89
Native American Firms	12.90%	7.20%	
MBE Firms	8.29%	9.51%	87
Nonminority Female Firms	9.32%	9.59%	97
M/WBE Firms	8.64%	9.65%	90
Construction			
African American Firms	12.31%	18.53%	66
Asian American Firms	32.84%	12.74%	
Hispanic American Firms	14.22%	19.68%	72
Native American Firms	22.35%	31.78%	70
MBE Firms	15.13%	19.28%	78
Nonminority Female Firms	15.17%	25.40%	60
M/WBE Firms	15.13%	19.29%	78
Architecture & Engineering			
African American Firms	3.82%	4.67%	82
Asian American Firms	2.66%	4.07%	65
Hispanic American Firms	5.64%	6.70%	84

BUSINESS OWNERSHIP CLASSIFICATION	OBSERVED SELF-EMPLOYMENT RATES	EXPECTED SELF-EMPLOYMENT RATES	DISPARITY RATIO
Native American Firms	0.00%	0.00%	
MBE Firms	3.89%	5.10%	76
Nonminority Female Firms	4.54%	4.34%	
M/WBE Firms	4.16%	5.09%	82
Professional Services			
African American Firms	7.79%	18.42%	42
Asian American Firms	10.58%	19.19%	55
Hispanic American Firms	11.98%	18.07%	66
Native American Firms	25.90%	34.39%	75
MBE Firms	9.73%	17.07%	57
Nonminority Female Firms	12.43%	14.00%	89
M/WBE Firms	10.69%	17.41%	61
Goods & Services			
African American Firms	5.68%	6.80%	84
Asian American Firms	10.80%	8.23%	
Hispanic American Firms	7.17%	8.35%	86
Native American Firms	8.63%	3.54%	
MBE Firms	7.21%	8.51%	85
Nonminority Female Firms	8.34%	8.79%	95
M/WBE Firms	7.60%	8.65%	88

Source: PUMS data from 2015-2019 American Community Survey (WSSC Water marketplace) and MGT Consulting Group, LLC, calculations using SPSS Statistics software.

The findings provide evidence that for M/WBEs, discriminatory barriers exist to achieving the same level of self-employment rates as their non-M/WBE counterparts. The results further show that discriminatory marketplace factors are the cause of these differences in several instances.

5.5 Access to Credit

As noted throughout this chapter, discrimination occurs when different outcomes occur for individuals of different races, ethnicities, and gender after holding all of the personal characteristics constant. This might happen in private and public labor markets when equally productive individuals in similar jobs are paid different wages because of their race, ethnicity, or gender. In credit markets, it might occur when loan approvals differ across racial or gender groups with otherwise similar financial backgrounds. In this chapter, MGT examined whether there is evidence consistent with the presence of discrimination in the private sector against M/WBE businesses. Discrimination in the credit market against M/WBEs can significantly affect the likelihood that they will form and succeed, negatively impacting the business's size and longevity.

This section summarizes some national analyses about credit disparities and, thus, offers illustrative evidence of M/WBE firms' barriers to accessing credit. This information provides guidance to the results provided throughout the private-sector analysis.

5.5.1 Minority Business Development Agency

The U.S. Department of Commerce, Minority Business Development Agency published a report in January 2010 entitled, *“Disparities in Capital Access between Minority and Non-Minority-Owned Businesses: The Troubling Reality of Capital Limitations Faced by MBEs.”* Findings highlighted that access to affordable credit remains one of the main impediments to minority-owned firm growth.

General findings show that minority-owned businesses: pay higher interest rates on loans, are more likely to be denied credit, and are less likely to apply for loans because they fear their applications will be rejected.

- ◆ Among high sales firms, 52% of nonminority firms received loans compared with 41% of minority firms.
- ◆ The average loan amount for all high sales minority firms was \$149,000. The nonminority average was more than twice this amount at \$310,000.
- ◆ Among firms with gross receipts under \$500,000, loan denial rates for minority firms were about three times higher, at 42%, compared to those of non-minority-owned firms, at 16%.
- ◆ Among firms with gross receipts under \$500,000, 33% of minority firms did not apply for loans because of fear of rejection compared to 17% of nonminority firms.
- ◆ For all firms, minority firms paid 7.8% on average for loans compared with 6.4% for nonminority firms.

5.5.2 The Federal Reserve Small Business Credit Survey

The Small Business Credit Survey (SBCS) is a national collaboration of the 12 Reserve Banks of the Federal Reserve System⁴⁹. This survey has been conducted annually since 2015. Survey responses are collected from firms throughout the United States. While statistics are provided regarding how many responses are from each census region and division⁵⁰, the data provided online does not report race by division. The reports vary somewhat from year to year. For example, the 2016 reports include specific reports for minority and female-owned firms; and the 2018 reports included one regarding disaster-affected firms. Overall, each year’s report documents that minority- and female-owned firms, particularly Black-owned firms, have less access to credit and pay more for credit than similarly situated white-owned firms. Data from four consecutive years documents the continuing challenge that minority-owned firms, particularly Black-owned firms, face regarding access to, and cost of, credit. Summary information from reports for employer firms is provided below.⁵¹

⁴⁹ The survey methodology provides for sample weighting to adjust for any sampling biases; race, ethnicity, and gender imputation by using statistical models to capture missing data; comparisons and adjustments to past reports; and credibility intervals to aide in survey estimates.

⁵⁰ Census regions and divisions are areas delineated for the purposes of statistical analysis and presentation.

⁵¹ Source: Small Business Credit Survey, Federal Reserve Banks.

SBCS 2016

REPORT ON MINORITY-OWNED FIRMS

The 2016 SBCS fielded in Q3 and Q4 2016 yielded 7,916 responses from employer firms with race/ethnicity information in 50 states and the District of Columbia.

- ◆ Black-owned firm application rates for new funding are ten percentage points higher than White-owned firms, but their approval rates are 19 percentage points lower.
- ◆ 40% of Black-owned firms did not apply for financing because they were discouraged (i.e., they did not think they would be approved), compared with 14% of White-owned firms.
- ◆ Looking at just firms approved for at least some financing, when comparing minority- and nonminority-owned firms with good credit scores, 40% of minority-owned firms received the total amount sought compared to 68% of nonminority-owned firms.
- ◆ Black-owned firms report more credit availability challenges (58% vs. 32%) and difficulty obtaining funds for expansion (62% vs. 31%) than White-owned firms.

REPORT ON FEMALE-OWNED FIRMS

- ◆ Low credit risk female-owned firms were less likely to be approved for business loans than their low credit risk male counterparts (68% compared to 78%).
- ◆ Sixty-four percent of female-owned firms reported a funding gap, receiving only some or none of the financing sought, compared to 56% of male-owned firms.
- ◆ Fewer female-owned firms received all of the funding sought than male-owned firms, and more females received none. Among low credit risk firms, 48% of female-owned firms received all of the financing requested, compared to 57% of male-owned firms.

SBCS 2017

REPORT ON EMPLOYER FIRMS

Fielded in Q3 and Q4 2017, the survey yielded 8,169 responses from small employer firms in the 50 states and the District of Columbia.

- ◆ Minority-owned firms report higher rates of financial challenges in the previous 12 months due to lack of credit availability than White-owned firms.
 - For firms with revenues less than \$1M, Black-owned firms (58%) reported financial challenges at twice the rate of white-owned firms (32%) (Asian 42%, Hispanic 45%).
 - For firms with revenues at more than \$1M: Black-owned firms, 49%, and White-owned firms, 24% (Asian 38%, Hispanic 34%).
- ◆ Rates of firms receiving at least some of the financing requested: for Black-owned firms, 61%, and White-owned firms 80% (Asian 73%, Hispanic 74%).
- ◆ For low credit risk firms, 85% of nonminority-owned firms received at least some of the financing requested compared with only 75% for similarly situated minority-owned firms.

- ◆ For low credit risk firms receiving total financing, 68% of nonminority-owned firms were approved compared to only 40% of minority-owned firms.

SBCS 2018

REPORT ON EMPLOYER FIRMS

There were 8,072 responses received for this survey from firms throughout the United States.

- ◆ Minority-owned firms report higher rates of financial challenges in the prior 12 months due to credit availability than white-owned firms. Rates were: Black-owned firms, 50%; Asian, 33%; Hispanic, 41%; and White-owned firms, 28%.
- ◆ Rates of firms receiving at least some of the financing requested ranged from a high of 80% for White-owned firms to a low of 59% for Black-owned firms.
- ◆ Rates of firms receiving the total amount requested ranged from a high of 49% for White-owned firms to a low of 23% for Black-owned firms.
- ◆ 38% of Black-owned firms did not apply for financing because they were discouraged (i.e., they did not think they would be approved), compared with 12% of White-owned firms.

SBCS 2019

REPORT ON MINORITY-OWNED FIRMS & REPORT ON EMPLOYER FIRMS

The annual survey of businesses was fielded in the third and fourth quarters of 2018 and generated 6,614 responses from employer firms.

- ◆ Minority-owned firms report higher rates of financial challenges in the prior 12 months due to credit availability than white-owned firms. Rates were: Black-owned firms, 51%; Asian, 36%; Hispanic, 40%; and White-owned firms, 30%.
- ◆ Rates of firms receiving at least some of the financing requested ranged from a high of 80% for White-owned firms to a low of 62% for Black-owned firms.
- ◆ Rates of firms receiving the total amount requested ranged from a high of 49% for White-owned firms to a low of 31% for Black-owned firms.
- ◆ 28% of Black-owned firms did not apply for financing because they were discouraged (i.e., they did not think they would be approved), compared with 13% of White-owned firms.
- ◆ On average, Black- and Hispanic-owned firm applicants received approval for smaller shares of the financing they sought than White-owned small businesses that applied for financing.
- ◆ Larger shares of Black- and Hispanic-owned firm applicants did not receive any financing they applied for—38% and 33%, respectively—compared to 20% of White-owned business applicants.
- ◆ White-owned business applicants received approval for all the financing they applied for: 49%, compared to 39% of Asian-, 35% of Hispanic-, and 31% of Black-owned firm applicants.

5.6 Conclusions

Analysis of the U.S. Census 2012 SBO data, 2017 ABS data, and the PUMS 2015-2019 data demonstrate, in response to the overarching research question driving this analysis, that marketplace discrimination exists for M/WBE firms operating in the private sector within WSSC Water's marketplace. Thus, based on the courts' guidance in this domain, WSSC Water has a compelling interest in continuing its current MBE program.

To the more specific research questions:

- ◆ Findings from the U.S. Census 2012 SBO and 2017 ABS data indicate substantial disparities for most M/WBE firms across industry sectors resembling the procurement categories identified for this study.
- ◆ Findings from the 2015-2019 PUMS data indicate that:
 - Minority and women wages were significantly less in 2015-2019 than those of nonminority males, holding all other variables constant.
 - M/WBE firms were significantly less likely than nonminority males to be self-employed.
 - If they were self-employed, most M/WBE firms earned significantly less in 2015-2019 than self-employed nonminority males, holding all other variables constant.
 - Analysis of observed vs. predicted self-employment rates show that marketplace discrimination impacted these rates. Further, this analysis indicates that holding all factors consistent, race, ethnicity, and gender play a role in the lower level of self-employment for M/WBEs.

A review of access to credit indicates that minorities and females tend to receive less than the requested amount of credit when they are approved than nonminority men; they are approved for credit less frequently than nonminority males, and that credit costs them more than nonminority males.

In light of these findings, credence may be given to the proposition established by Justice O'Connor in *Croson*, which suggested a government could be a passive participant in private-sector discrimination if it did not act to counter these dynamics within the domain of its influence. This evidence stands alongside the disparities observed in public sector contracting to illustrate the substantial discriminatory inequities that continue to exist in WSSC Water's marketplace, underscoring its compelling interest in continuing to pursue remedies to address these gaps.

6. Qualitative Data Analysis

6.1 Introduction

This chapter examines the qualitative evidence from M/WBE firms about the discriminatory obstacles they face in the study market area and their experiences working with WSSC Water, WSSC Water’s prime contractors, and within the private sector. We have presented statistical findings in previous sections that are consistent with and indicative of the presence of business discrimination against minority and women-owned firms in the geographic and product markets that are relevant to WSSC Water in **Chapter 3 Market Area and Utilization Analyses, Chapter 4 Availability and Disparity Analyses, and Chapter 5 Private Sector**. In conjunction with the quantitative data, MGT also drew inferences from the qualitative data as to the prevalence of obstacles perceived as limiting the participation of M/WBEs in WSSC Water’s procurements. The evidence found that M/WBE firms face business-related discrimination in the relevant marketplace at substantially higher rates than non-M/WBEs. Additionally, the results show that M/WBE firms that were solicited for projects with M/WBE goals are seldom or never solicited for projects without goals. The relative lack of solicitation of M/WBEs in the absence of affirmative efforts by WSSC Water and other public entities in the relevant market area shows that business discrimination continues to be a barrier to M/WBE business opportunities.

Chapter Sections	
6.1	Introduction
6.2	Qualitative Background
6.3	Methodology
6.4	Online and Telephone Business Survey
6.5	Business Owners In-Depth Interviews
6.6	Stakeholder Engagement
6.7	Summary

Qualitative comments in this chapter detail the perceptions and opinions of individuals as they relate to discrimination in the WSSC Water marketplace. The importance of these opinions depends on how much they are corroborated by others' statements and the quantitative data compiled to substantiate these perceptions. Unlike conclusions derived from other analyses in this report, the qualitative analysis does not rely solely on quantitative data. Instead, the analysis in this chapter utilizes qualitative data to describe the discriminatory context of the examined social, political, and economic environment in which all businesses and other relevant entities applicable to the study operate. This analysis assesses the broad patterns among large groups of businesses based on their business ownership classification and industry.

MGT used a combination of surveys, community meetings, and one-on-one interviews with businesses to collect qualitative data that are analyzed to identify the presence of discrimination, issues, and concerns common to businesses in the market area. In addition to the qualitative data collection from area businesses, MGT and WSSC Water identified area trade associations and business organizations referred to as stakeholders for this report, whose insights would be valuable in understanding the dynamics and perceptions of the vendor community.

In the successive sections, findings are generally organized around themes of discriminatory concerns expressed by vendors, with evidence divided between (1) items identified through qualitative input from qualitative research participants (interviews and open-ended comments) and (2) quantitative summaries of perceptions collected through the business surveys. In some cases, content is limited to one category of findings based on the scope of the information collected through either medium.

6.2 Qualitative Background

A major component of this study is collecting and analyzing quantitative data from the entity's procurement and contracting records to determine if discrimination bears any relationship to the extent to which businesses are "chosen" in government contracting and procurement to provide needed goods and services that government cannot deliver on its own. Government purchasing records identifying race, ethnicity, or gender of utilized businesses provide the quantitative record for determining inferences of discrimination. To provide context to the quantitative results, an account of business owner experiences in dealing with the government procurement processes and with other businesses, in a given jurisdiction, qualitative and anecdotal information is also gathered in the form of telephone, online surveys, and individual interview sessions. The data collected are intended to explain the quantitative results from purchasing and procurement data by providing insight into purchasing trends that might explain how discrimination plays out and evolves in the marketplace.

6.3 Methodology

MGT used a combination of surveys, community meetings, and one-on-one interviews with businesses to collect qualitative data that are analyzed to identify issues and concerns common to businesses in the market area. MGT also conducted in-depth interviews with area trade associations and business organizations to gather anecdotes on their perceptions of WSSC Water's procurement process and the impact of the MBE and SLBE programs on M/WBE and non-M/WBE firms in the market area. While the courts do not require the collection of these anecdotes, input from advocacy and professional development organizations gives a third-party perspective of M/WBE issues. It broadens the collection of M/WBE firms' experiences doing or attempting to do business with WSSC Water.

6.3.1 Sampling

MGT's sampling methodology for in-depth interviews and business surveys randomly selected firms from the study's master vendor database⁵². The samples were stratified by the number of firms, race, ethnicity, gender ownership classification, and business industry. The database was cross-referenced with previous extractions to avoid contacting businesses multiple times to ensure that firms did not participate in more than one qualitative data collection activity. Receiving single anecdotal accounts from only one business allows for a broader collection of unique experiences. The qualitative analysis is not steered to the particular interests of a small group of participants.

Additionally, M/WBE firms were oversampled to facilitate statistical comparisons with non-M/WBEs. Oversampling is the practice of selecting respondents so that some groups make up a larger share of the survey sample than they do in the population. Knowing that M/WBEs make up a smaller population, it is crucial to oversample to acquire accurate and comparable responses.

⁵² See Chapter 3, Market Area and Utilization Analysis for explanation.

6.3.2 Business Survey

The business survey asked respondents to provide information on business ownership, demographics, and structure; work bid or performed as prime contractors with WSSC Water; work bid or performed as subcontractors to WSSC Water prime contractors; whether the respondent firm bid or performed work in the private sector; and any perceived barriers they had experienced, including discrimination, to doing business with WSSC Water or its primes during the study period. The survey was administered via telephone and online to a randomly selected list of firms. The survey of vendors questionnaire is included in this report as **Appendix F, Business Survey Instrument**.

The data from the survey responses were analyzed to determine the types of firms represented in the findings included in this chapter. These survey results are included in **Appendix G, Demographics of Business Survey Respondents**.

6.3.3 Community Meetings

Area businesses and stakeholders were invited to attend virtual community meetings to learn about the study and provide qualitative input on doing business with WSSC Water and the marketplace. Due to the COVID-19 pandemic, MGT conducted two virtual community meetings on November 17, 2020, and November 19, 2020. The community meetings were open to all businesses in the market area. The community meetings educate attendees on the study's objectives, work tasks, and methods by which qualitative data can be received.

6.3.4 In-Depth Interviews

The in-depth interviews were individual interviews with M/WBE and non-M/WBE business owners or representatives to gather information about the firms' experiences attempting to conduct business with WSSC Water (both directly as a prime or as a subcontractor). During the interviews, MGT gathered demographic information such as the firm's primary line of business, ethnicity, gender, education/training background of the owner, business history, size, and gross revenues during a selected calendar or fiscal year. The in-depth interviews were structured settings where an interviewer or facilitator used an interview guide (**Appendix H, In-Depth Interview Guide**) to obtain input from participants. The interviews provided more latitude for additional information on issues unique to the respondents' experiences than the community meetings or surveys. The interviewer did not attempt to prompt or guide responses from the participants, although follow-up questions were asked to obtain further clarification or information as necessary and appropriate. Before the interviews began, each participant attested that their responses were given freely and were true and accurate reflections of their experience with WSSC Water or its prime contractors.

6.3.5 Stakeholder Outreach

Outreach to stakeholders (trade associations and business organizations) benefited the outreach strategy because their assistance extended communication efforts to inform and engage the business community in qualitative activities. The stakeholders disseminated community meetings and study update notices to their members. Stakeholders were also asked to provide MGT with a copy of membership or vendor lists

they used to help build the master vendor outreach database. The organizations and associations included in these efforts are identified in **Appendix J, List of Trade Associations and Business Organizations**.

6.4 Online and Telephone Business Survey

The business survey asked respondents to provide information on business ownership, demographics, and structure; work bid or performed as prime contractors with WSSC Water; work bid or performed as subcontractors to WSSC Water prime contractors; whether the respondent firm bid or performed work in the private sector; and any perceived barriers they had experienced, including discrimination, to doing business with WSSC Water or its primes during the study period. The survey was administered via telephone and online to a randomly selected list of firms.

MGT attempted to collect data in proportion to the distribution of M/WBEs and non-M/WBEs in the relevant market area. Although MGT’s goal is to report data that can satisfy the 95 percent confidence level, this does not mean that data should not be reported because of slightly reduced confidence intervals, especially when extreme due diligence has been exercised in attempting to meet the 95 percent standard. The survey of vendors questionnaire is included in this report as **Appendix F, Business Survey Instrument**.

The data from the survey responses were analyzed to determine the types of firms represented in the findings included in this chapter. These survey demographics are included in **Appendix G, Demographics of Business Survey Respondents**.

The survey collected 1,579 responses from firm owners and representatives in WSSC Water’s relevant market area. **Table 6-1** provides respondents' race, ethnicity, and gender from the procurement categories included in the study. Due to oversampling, M/WBE firms accounted for 65 percent of the total respondents, with African American firms representing 30 percent of those that participated, followed by Hispanic American firms at 14 percent, Asian American firms at 11 percent, Native Americans at less than 1 percent, and Nonminority Female firms totaling 10 percent.

TABLE 6-1.
SURVEY OF VENDORS

CATEGORY	AFRICAN AMERICAN	ASIAN AMERICAN	HISPANIC AMERICAN	NATIVE AMERICAN	MBE	NON-MINORITY FEMALE	TOTAL M/WBE	NON-MWBE
CONSTRUCTION	27%	7%	17%	0%	51%	6%	57%	43%
A&E	16%	25%	7%	2%	50%	13%	63%	36%
PROFESSIONAL SERVICES	43%	20%	11%	0%	74%	16%	90%	11%
GOODS & SERVICES	32%	8%	11%	0%	51%	11%	62%	38%
TOTAL	30%	11%	14%	0%	55%	10%	65%	35%

Source: Business Surveys, SkyBase7 & Online Surveys.

Native Americans did respond to the survey but, due to rounding, appear as 0 percent.

6.4.1 Discriminatory Barriers to Doing Business

Barriers to doing business with WSSC Water, WSSC Water's primes, or in the prime sector marketplace can hinder a business's ability to exist, compete, and grow. The telephone and online survey included questions regarding instances of discriminatory treatment based on minority or gender status experienced while attempting to do business. **Table 6-2 & Table 6-3** shows that in almost every category, regardless of prime or subcontractor status, M/WBE firms experience substantially higher discriminatory treatment levels while doing business than their non-M/WBE counterparts.

Overall, indications of discriminatory treatment were reported highest by Native American prime contractors, with an overall rate of 36 percent. Across the other groups, the reports were: African Americans (13 percent), Hispanic Americans (9 percent), Asian Americans (7 percent), and nonminority females (6 percent). Comparing these results to non-M/WBEs, the overall average of incidences reported by M/WBEs was 487 percent higher. M/WBE subcontractors followed a similar pattern of discriminatory treatment. Native American subcontractors reported the highest discriminatory treatment incidences (53 percent). Across the other groups, the reports were: African Americans (14 percent), Hispanic Americans (9 percent), Asian Americans (8 percent), and nonminority females (9 percent). The overall average of incidences reported by M/WBEs was 200 percent higher than non-M/WBEs. M/WBEs reported experiencing higher levels of each discriminatory treatment, in particular:

- ◆ For M/WBE prime contractors, when changes to the scope of work after work began, the incidence of discriminatory treatment was 1,252 percent higher than non-M/WBEs.
- ◆ For M/WBE prime contractors during the selection and evaluation process, the incidence of discriminatory treatment was 1,167 percent higher than non-M/WBEs.
- ◆ For M/WBE prime contractors in meeting contract insurance requirements, the incidence of discriminatory treatment was 1,031 percent higher than non-M/WBEs.
- ◆ For M/WBE prime contractors in informal networks that excluded their firms from doing business, the incidence of discriminatory treatment was 865 percent higher than non-M/WBEs.
- ◆ For M/WBE subcontractors, the cost of bidding or proposing the incidence of discriminatory treatment was 558 percent higher than non-M/WBEs.
- ◆ For M/WBE subcontractors regarding the contract size, the discriminatory treatment incidence was 414 percent higher than non-M/WBEs.
- ◆ For M/WBE subcontractors in slow payment or no payment, the incidence of discriminatory treatment was 413 percent higher than non-M/WBEs.
- ◆ For M/WBE subcontractors to meet contract insurance requirements, the incidence of discriminatory treatment was 402 percent higher than non-M/WBEs.

TABLE 6-2.
BARRIERS IDENTIFIED BY SURVEY RESPONDENTS
PRIME FIRMS

BARRIER	AFRICAN AMERICAN	ASIAN AMERICAN	HISPANIC AMERICAN	NATIVE AMERICAN	MBE	NON-MINORITY FEMALE	TOTAL M/WBE
Prequalification requirements	18%	13%	16%	50%	16%	8%	15%
Visibility or awareness of solicitations/contracting opportunities	25%	21%	27%	75%	25%	18%	24%
Bond requirements	13%	2%	5%	25%	8%	3%	7%
Proposal/bid specifications	14%	7%	10%	25%	12%	7%	11%
Short or limited time given to prepare bid package or quote	15%	8%	11%	50%	13%	5%	12%
Unnecessarily restrictive contract specifications	13%	9%	12%	50%	12%	7%	11%
Meeting MBE/SLBE program requirements	6%	2%	1%	25%	4%	2%	4%
Identifying MBE/SLBE firms	8%	2%	3%	0%	5%	2%	5%
Selection process/evaluation criteria	14%	9%	8%	75%	12%	2%	10%
Insurance requirements (general liability, professional liability, etc.)	5%	2%	0%	25%	3%	2%	3%
Cost of bidding/proposing	7%	4%	1%	50%	5%	4%	5%
Price of supplies/materials	6%	2%	1%	25%	4%	1%	3%
Competing with large companies	32%	15%	21%	50%	25%	17%	24%
Financing	12%	4%	1%	25%	7%	3%	7%
Lack of experience	10%	3%	2%	25%	7%	3%	6%
Contract too large	14%	3%	2%	50%	8%	7%	8%
Informal network of prime contractors and subcontractors that has excluded my company from doing business ("good ole boy" network)	25%	20%	21%	25%	23%	11%	21%
Changes in the scope of work (after work began)	6%	6%	10%	0%	7%	7%	7%
Slow payment or non-payment for project work	7%	12%	17%	25%	11%	5%	10%

Source: Business Surveys, SkyBase7 & Online Surveys.

Note: Percentages are calculated based on responses within each individual race, ethnicity, or gender category.

TABLE 6-3.
BARRIERS IDENTIFIED BY SURVEY RESPONDENTS
SUBCONTRACTORS

BARRIER	AFRICAN AMERICAN	ASIAN AMERICAN	HISPANIC AMERICAN	NATIVE AMERICAN	MBE	NON-MINORITY FEMALE	TOTAL M/WBE
Visibility or awareness of solicitations/contracting opportunities	16%	10%	14%	67%	15%	12%	14%
Bond requirements	20%	7%	14%	33%	17%	10%	16%
Short or limited time given to prepare bid package or quote	12%	7%	8%	67%	11%	4%	10%
Unnecessarily restrictive contract specifications	14%	7%	8%	67%	12%	14%	13%
Selection process/evaluation criteria	15%	11%	11%	67%	14%	16%	14%
Insurance requirements (general liability, professional liability, etc.)	12%	7%	5%	33%	10%	6%	9%
Cost of bidding/proposing	12%	7%	6%	67%	10%	2%	9%
Price of supplies/materials	5%	3%	0%	67%	4%	2%	4%
Competing with large companies	18%	10%	12%	67%	16%	14%	16%
Financing	9%	3%	3%	0%	7%	8%	7%
Lack of experience	21%	10%	14%	33%	18%	8%	17%
Contract too large	13%	6%	6%	67%	11%	0%	10%
Informal network of prime contractors and subcontractors that has excluded my company from doing business ("good ole boy" network)	18%	10%	15%	100%	17%	10%	16%
Changes in the scope of work (after work began)	13%	10%	6%	33%	11%	14%	11%
Slow payment or non-payment for project work	16%	14%	11%	33%	15%	15%	15%

Source: Business Surveys, SkyBase7 & Online Surveys.

Note: Percentages are calculated based on responses within each individual race, ethnicity, or gender category.

As discussed in **Chapter 4, Availability and Disparity Analyses**, variables such as firm age, firm financing, bonding limits, or experience are all impacted by discrimination. Regardless, if specific differences between M/WBEs and non-M/WBEs are present after holding these variables constant, the inference of discrimination is more powerful. Like the Logit model described in **Chapter 5, Private Sector**, a Logit model was utilized to control for these variables and show the impact that M/WBE status had on an individual, indicating that the barrier had a discriminatory effect on doing business. This model was conducted on both the prime and subcontractor respondents. For the model, the firm characteristics used as control variables were the firm's age, the number of employees, the size of revenues, and the education level of the primary owner of the firm. In **Table 6-4** and **Table 6-5**, a “+” indicates that M/WBEs are more likely to indicate that the barriers had a discriminatory impact on doing business than non-M/WBEs. Overall, the results show that when firm characteristics are held constant, M/WBE firms are more likely to indicate barriers such as insurance requirements, bond requirements, selection process, and slow payments impact doing business at statistically significant rates.

TABLE 6-4.
PRIME CONTRACTOR SURVEY RESPONSES LOGIT

BARRIER	TOTAL M/WBE
Prequalification requirements	+*
Visibility or awareness of solicitations/contracting opportunities	+*
Bond requirements	+*
Proposal/bid specifications	+
Short or limited time given to prepare bid package or quote	+
Unnecessarily restrictive contract specifications	+
Meeting MBE/SLBE program requirements	+*
Identifying MBE/SLBE firms	
Selection process/evaluation criteria	+*
Insurance requirements (general liability, professional liability, etc.)	+*
Cost of bidding/proposing	
Price of supplies/materials	
Competing with large companies	+*
Financing	+
Lack of experience	
Contract too large	
An informal network of prime contractors and subcontractors that has excluded my company from doing business ("good ole boy" network)	+*
Changes in the scope of work (after work began)	+*
Slow payment or non-payment for project work	+*

Source: Business Surveys, SkyBase7 & Online Surveys. Note: “*” indicates significance at a 5% level or better (95% confidence).

TABLE 6-5.
SUBCONTRACTOR CONTRACTOR SURVEY RESPONSES LOGIT

BARRIER	TOTAL M/WBE
Visibility or awareness of solicitations/contracting opportunities	+
Bond requirements	+*
Short or limited time given to prepare bid package or quote	+*
Unnecessarily restrictive contract specifications	+*
Selection process/evaluation criteria	+
Insurance requirements (general liability, professional liability, etc.)	+*
Cost of bidding/proposing	+*
Price of supplies/materials	
Competing with large companies	+
Financing	+
Lack of experience	
Contract too large	+*
Informal network of prime contractors and subcontractors that has excluded my company from doing business ("good ole boy" network)	+*
Changes in the scope of work (after work began)	+
Slow payment or non-payment for project work	+*

Source: Business Surveys, SkyBase7 & Online Surveys. Note: "*" indicates significance at a 5% level or better (95% confidence).

6.4.2 Prime Contracting Inclusion of M/WBEs on Projects with and without Goals

Firms that participated in the qualitative data collection who also work in the private sector as primes noted that relationships are the foundation of their success. However, M/WBE subcontractor firms were not as fortunate in developing such relationships because the private sector does not historically have M/WBE goal requirements on their contracts, which means that without goals, primes hire M/WBE subcontractors for their projects at lower rates than their non-M/WBE counterparts. In *Builders Association of Greater Chicago v. City of Chicago*, the court held that the failure of prime contractors even to solicit qualified M/WBE firms is a "market failure" that is significant evidence in helping to establish a government's compelling interest in remedying such failures⁵³.

Survey respondents who indicated they were subcontractors or suppliers were asked how often prime contractors/vendors solicited their firm to bid on projects with M/WBE goals compared to those without M/WBE goals. The survey sought to determine if prime contractor behavior was the same when projects applied M/WBE goals versus projects without goals.

Participants overwhelmingly agreed that primes that solicit bids for public sector work were not soliciting M/WBE firms for private projects. **Table 6-6** below details survey respondents' experiences with primes when projects do not include M/WBE goals. The survey asked, "How often do prime contractors/vendors

⁵³ *Builders Association of Greater Chicago v. City of Chicago*, 298 F.Supp. 2d 725, 737 (N.D. Ill. 2003).

who use your firm as a subcontractor on public-sector projects with M/WBE goals solicit your firm on projects (private or public) without M/WBE goals?” For M/WBEs collectively, 65 percent indicated that they are seldom or never solicited on projects without goals. Individually, African American firms experienced the largest impact of exclusion when there were no goals (70 percent). Additionally, 63 percent of Hispanic American firms responded that they were seldom or never used on projects without goals, followed by 56 percent of non-minority females and 55 percent of Asian Americans. Similar results were observed in each major procurement category.

TABLE 6-6.
PRIMES LACK OF SOLICITATION OF M/WBE FIRMS ON PROJECTS WITHOUT GOALS

BUSINESS OWNERSHIP CLASSIFICATION	A&E	CONSTRUCTION	GOODS & SERVICES	PROFESSIONAL SERVICES	TOTAL
AFRICAN AMERICAN	56%	65%	81%	77%	70%
ASIAN AMERICAN	75%	55%	50%	38%	55%
HISPANIC AMERICAN	75%	33%	100%	44%	63%
NATIVE AMERICAN	0%	0%	0%	0%	0%
MBE	67%	58%	76%	65%	67%
NON-MINORITY FEMALE	50%	77%	60%	37%	56%
TOTAL M/WBE	64%	60%	74%	60%	65%

Source: Business Surveys, SkyBase7 & Online Surveys.

Further evidence of “Market Failure” can be seen in **Table 6-7**. This table summarizes the firms’ experiences being released from WSSC Water and non-WSSC Water projects after the project has been awarded. As shown above, in **Table 6-6**, M/WBE firms are seldomly asked to participate in nongal projects. When M/WBEs are asked to be a part of non-WSSC Water projects, the table shows, that the prevalence of M/WBEs being dropped from the project is much higher on non-WSSC Water projects than on WSSC Water projects. African American-owned businesses experienced being dropped from non-WSSC Water projects at the highest degree, followed by non-minority females, Asian Americans, and Hispanic Americans.

TABLE 6-7.
M/WBE FIRMS DROPPED AFTER PROJECT AWARD

PROJECT TYPE	AFRICAN AMERICAN	ASIAN AMERICAN	HISPANIC AMERICAN	NATIVE AMERICAN	MBE	NON-MINORITY FEMALE	TOTAL M/WBE
WSSC Water Project	3%	0%	2%	0%	2%	2%	2%
Non-WSSC Water Project	17%	10%	6%	0%	13%	11%	13%

Source: Business Surveys, SkyBase7, & Online Surveys

6.4.3 Discrimination and Disparate Treatment

This section examines understanding and identifying the type of discriminatory treatment encountered by M/WBEs working with WSSC Water or WSSC Water’s primes. A trend for firms that participated in the interviews, surveys or community meetings was the indication that discrimination is prevalent and happens frequently in subtle ways and even to their peer competitors in the marketplace. When asked why their company was discriminated against, 15 percent of the survey respondents said they believe they were discriminated against due to race, ethnicity, or gender. **Table 6-8** shows the type of discrimination felt by those indicating they were discriminated against based on their race, ethnicity, or gender. Individually, African American firms indicated experiencing the highest levels of direct discrimination against them due to race. Additionally, all other groups indicated direct discrimination compared to nearly no indication for non-M/WBEs.

TABLE 6-8.
DISCRIMINATORY TREATMENT IDENTIFIED BY PRIMES AND SUBCONTRACTORS

DISCRIMINATORY ACT	AFRICAN AMERICAN	ASIAN AMERICAN	HISPANIC AMERICAN	NATIVE AMERICAN	MBE	NON-MINORITY FEMALE	TOTAL M/WBE	NON-MWBE
Harassment	20%	2%	2%	0%	6%	3%	5%	0%
Unequal or unfair treatment	24%	2%	2%	0%	7%	3%	6%	1%
Double standards in performance	12%	2%	2%	0%	4%	1%	3%	0%
Denial of opportunity to bid	17%	2%	2%	0%	5%	2%	5%	1%
Unfair denial of contract award	11%	1%	0%	0%	3%	0%	2%	0%
Unfair termination	14%	2%	0%	0%	4%	2%	4%	0%
Unequal price quotes from suppliers	30%	0%	0%	0%	8%	0%	6%	0%

Source: Business Surveys, SkyBase7 & Online Surveys

6.5 Business Owners In-Depth Interviews

The in-depth interviews were individual interviews with M/WBE and non-M/WBE business owners or representatives to gather information about the firms’ discriminatory experiences attempting to conduct business with WSSC Water (both directly as a prime or as a subcontractor) and in the private marketplace. During the interviews, MGT gathered demographic information such as the firm’s primary line of business, ethnicity, gender, education/training background of the owner, business history, size, and gross revenues during a selected calendar or fiscal year. The interviews provided more open-ended latitude for additional information on discriminatory issues unique to the respondents’ experiences. The interviewer did not attempt to prompt or guide responses from the participants, although follow-up questions were asked to obtain further clarification or information as necessary and appropriate. Before the interviews began,

each participant attested that their responses were given freely and were true and accurate reflections of their experience with WSSC Water or its prime contractors. The in-depth interviews were structured settings where an interviewer or facilitator used an interview guide (**Appendix H, In-Depth Interview Guide**) to obtain input from participants.

The following are summaries of the discriminatory issues discussed. They mirror and corroborate the results from the telephone and online survey results provided throughout this chapter. Quotations are intended to represent the views expressed by multiple participants. The in-depth interviews were conducted with randomly selected firms extracted from the master vendor database and located in WSSC Water's relevant market area.⁵⁴ MGT cross-referenced the list of firms for the interviews to ensure they were not previously selected for other qualitative activities. In total, 47 firms were interviewed.

6.5.1 Experiences from M/WBEs on Prime Behavior

As illustrated throughout this chapter, many of the actions taken by prime contractors discriminates directly against M/WBEs. A few of the anecdotes from the interview and the community meetings include:

- ◆ A nonminority female owner of a specialty trade contracting company stated that “primes know of you, but in this industry if there is no relationship, primes will not provide opportunities.”
- ◆ An African American owner of a professional services firm stated that “contractors use the same non-M/WBE firms repeatedly.”
- ◆ An African American specialty contractor stated, “they had experiences with a general contractor who always requested bids for the firm for WSSC Water projects. However, the general contractor only asked for bids without hiring the MBE firms because they would self-perform traffic control.”
- ◆ An Asian American services firm owner stated, “if there is no M/WBE requirement on contracts, the primes will not call you.”

6.5.2 Financial Barriers Expressed by M/WBE Firms

Limited access to capital and inconsistent cash flow impacts M/WBE and small firms' ability to complete projects, apply for and receive bonds, hire employees, and operate their businesses. Similarly, cash flow becomes a barrier for M/WBE firms, notably smaller M/WBE firms, because it limits the amount of work they can bid. As the results in **Chapter 5 Private Sector** shows, M/WBEs consistently earn less wages and less business earnings than their non-M/WBE counterparts. The anecdotes add credence to the assertion that with less capital M/WBEs face financial barriers to operating their businesses.

Several anecdotes showed minority businesses with Caucasian partners or spouses could quickly establish relationships with bankers. However, minority firms making the connection with bankers were not as successful. Many firms stated that they started their business with their own money. During the COVID-19 pandemic, many firms noted that the Payroll Protection Program and Economic Injury Disaster Loan (EIDL) monies were valuable to keeping their businesses operating even though they had to reduce their

⁵⁴ See Chapter 3, Market Area and Utilization Analyses.

staff. Acquiring bonding for projects continues to be a financial barrier for M/WBE firms that prevents them from being primes and limits their ability to scale up to larger subcontracts.

Comments gathered from interview and community engagement participants highlight their financial barriers to doing business:

- ◆ A Hispanic American specialty trade contracting firm stated that “insurance and bonds are costly, and smaller firms cannot compete against large firms with more capital. To afford insurance, the firm received a loan to cover the cost.”
- ◆ An African American construction business owner stated that they “do not bid on projects as a prime or subcontractor when a payment and performance bond is required.” Their reason is that “they don’t trust nonminority primes with their company’s financial well-being.”
- ◆ An Asian American owner of a professional firm stated that their “company has been denied credit, but his bank also denied lending from the Payroll Protection Program without any reason why.”
- ◆ A Hispanic American construction firm owner stated, “bonding is difficult because primes do not pay on time; slow payment impacts the firm’s cash flow needed to obtain or maintain bonding.”
- ◆ A Hispanic American services firm owner stated that the insurance requirements are “one-size fits all,” which is excessive for most work and cannot be negotiated.”
- ◆ A nonminority female specialty trade contractor stated that “capital financing limits their ability to compete on larger projects.”
- ◆ An African American professional services owner reflected that the bank is pressuring them to use their line of credit. “Government establishments want you to overextend so that you don’t survive.” The firm owner continued by stating that customers and vendors want to know how much money the owner has personally. The firm owner refuses to answer the question because they are sure this question is not being asked of his white counterparts or is relevant to their ability to perform the work successfully.

6.5.3 Procurement Process Issues and Challenges for M/WBEs

A common theme across these interviews was procurement issues and challenges faced by M/WBEs and how these issues affect M/WBEs disproportionately. Included below are comments from interview and community meeting participants reflecting specific instances of these barriers:

- ◆ An Asian American engineering firm owner stated, “WSSC Water should not always look for large companies. Smaller firms have the same qualifications and expertise. Specifically, including small, disadvantaged firms will help WSSC Water meet its goals and help businesses grow.”
- ◆ A nonminority female professional services firm stated that the “public sector has high expectations for its RFP process, which does not fit small businesses.” The owner’s experience is that “awarded firms have a system, and staff are experts at responding to

RFPs. Winning a contract through the RFP process is ‘impossible’ because you can’t talk with the end-user. Firms must submit a slew of paperwork each time, and each time it is like starting from scratch.”

- ◆ An Asian American architectural firm owner stated their “primary barrier is the owner has years of experience working on similar projects. Still, the company's age deems their firm unqualified based on the criterion demanded.”

6.6 Stakeholder Engagement

Involving area trade associations and business organizations (stakeholders) that provide advocacy for and professional development to businesses in similar services in the WSSC Water market area can be helpful to the success of WSSC Water’s program objectives. For this study, trade organizations and business associations assisted with outreach and provided insight into minority and women business growth, development, and barriers they face in the marketplace.

There were two themes expressed by the trade groups interviewed; detailed below.

Challenges for Minority/Woman-Owned Businesses: Many challenges facing established minority and woman-owned businesses were the same for start-ups but are more prevalent for M/WBEs. As with start-ups, minority-led organizations serving minority businesses also raised a constellation of issues related to record-keeping, administrative systems, knowledge of how to fill out procurement paperwork, and lack of access to capital/credit/bonding nonminority firms did not appear to have.

In many cases, these problems were attributed to a lack of valuable connections and not knowing the culture of the business or a specific industry. These problems could be attributed to “good-ole-boy” or bonding social capital networks among established business owners, many of whom are white males. However, in the majority-African American county of Prince George’s and diverse Washington DC, organization representatives noted that these race-based networks are starting to break down due to years of affirmative action and networking programs.

Discriminatory Barriers to Doing Business in the Private Sector: While many obstacles to doing business in the private sector were similar, such as lack of networks to hear about contracts and related issues, or lack of knowledge of business practices like change orders, two significant issues stood out. One involved a lack of ethics among primes and owners of the projects. Examples included expectations of low prices from M/WBE businesses bidding on their jobs, failure to pay promptly, demanding bonding and insurance levels that were cost-prohibitive for small businesses or finding excuses to fire contractors halfway through a job without paying them.

Particularly for minority firms, these organizations noted halfhearted efforts by large firms to conduct M/WBE contracting. Examples included scheduling meetings with minority firms with lower-level staff who possessed no authority to offer business to these firms and a lack of follow-up after meetings. Others reported paperwork and other administrative barriers that made it hard to get into diverse supplier systems that routinely offered work to M/WBE/SLBE firms.

6.7 Summary

The evidence from the qualitative and anecdotal activities is consistent with and corroborates the finding of discrimination from **Chapter 3 Market Area and Utilization Analyses**, **Chapter 4 Availability and Disparity Analyses**, and **Chapter 5 Private Sector**. The qualitative evidence suggests that M/WBEs face discriminatory barriers to full and equitable participation in public and private sector contracts in the WSSC Water market. The results also show that M/WBE firms face business-related discrimination in the relevant marketplace at substantially higher rates than non-M/WBEs. Additionally, the results show that M/WBE firms that were solicited for projects with M/WBE goals are seldom or never solicited for projects without goals. The relative lack of solicitation of M/WBEs in the absence of affirmative efforts by WSSC Water and other public entities in the relevant market area shows that business discrimination continues to be a barrier to M/WBE business opportunities. These activities have yielded evidence that courts have found to be highly probative in deciding whether an entity such as WSSC Water has been or continues to be a passive participant in a discriminatory market area. This is particularly true when considered in conjunction with the other statistical and quantitative evidence provided in this report.

Qualitative data were collected using multiple methods and included a broad reach of diverse businesses and business industries. Feedback from many businesses had common discriminatory themes regarding their experiences working or attempting to work with WSSC Water, such as prime contractors rarely utilizing M/WBEs when there were no project goals, dropping M/WBEs from projects they were initially included after the work began, and numerous discriminatory barriers in doing business (i.e., insurance requirements, slow or no payments, cost of bidding, or contract requirements).

7. Findings, Goals, and Best Practices

7.1 Introduction

The Washington Suburban Sanitary Commission (WSSC Water) retained MGT of America Consulting, LLC (MGT) to conduct WSSC Water’s 2022 availability and disparity study. The goal of the Disparity Study is to determine if there are any disparities between the utilization of minority or women business enterprises (M/WBEs) compared to the availability of M/WBEs in the marketplace who are ready, willing, and able to perform work, and whether such disparities are consistent with the existence of discrimination. MGT examined the statistical data using the following procurement categories:

- ◆ Construction;
- ◆ Architecture & Engineering;
- ◆ Professional Services; and
- ◆ Goods & Services

Chapter Sections	
7.1	Introduction
7.2	Findings
7.3	Aspirational Goals Methodology
7.4	Selected Industry Practices
7.5	Conclusions

WSSC Water’s 2022 Disparity Study consisted of fact-finding to analyze procurement trends and practices from July 1, 2014, through June 30, 2019 (FY2015 – FY2019) regarding the utilization of minority and women business enterprises, and to evaluate various options for future program development. Within the context of studying WSSC Water’s procurement practices, the study must be conducted consistent with disparity study best practices, controlling local legal precedents and constitutional law.

WSSC Water’s Disparity Study determined that there are discriminatory disparities between the number of minority- and female-owned businesses that are willing and able to perform construction, architecture & engineering, professional services, and goods & services contracts, and the numbers of these same business types that are participating in these same types of contracts with WSSC Water. This chapter will summarize the evidence on the central research question: *is there factual predicate evidence for the continuation of WSSC Water’s MBE and SLBE programs?*

As discussed throughout this study, courts have determined that a race-conscious program involving governmental procurement of goods or services is subject to strict judicial scrutiny under the Equal Protection Clause of the Fourteenth Amendment to the United States Constitution and must be narrowly tailored to remedy the identified discrimination.

MGT’s methodology included a review of disparity studies’ legal framework, a policy and procedures review, analyses of utilization, availability, and statistical disparity, qualitative/anecdotal research, private sector analyses, and findings, establishment of aspirational goals methodology, and industry best practices. The results of this study and conclusions drawn are presented in detail in **Chapters 2** through **6** of this report.

7.2 Findings

Finding A: Relevant Geographic and Product Market Areas *(Chapter 3, Appendix B)*

The entire universe of expenditure data was utilized to determine the relevant geographic market area for the study.⁵⁵ This included both expenditures to prime contractors and subcontractors. Based on the market area analysis results for each business category, the recommended relevant market area are the 29 counties and independent cities within the WSSC Water Market Area (“Market Area”), as seen in the right-hand box.

WSSC Water Relevant Market Area	
Anne Arundel County, MD	Washington, DC
Arlington County, VA	Fairfax County, VA
Baltimore County, MD	Fauquier County, VA
Calvert County, MD	Frederick County, MD
Carroll County, MD	Howard County, MD
Charles County, MD	Jefferson County, WV
City of Alexandria, VA	Loudoun County, VA
City of Baltimore, MD	Montgomery County, MD
City of Fairfax, VA	Prince George’s County, MD
City of Falls Church, VA	Prince William County, VA
City of Fredericksburg, VA	Rappahannock County, VA
City of Manassas Park, VA	Spotsylvania County, VA
City of Manassas, VA	Stafford County, VA
Clarke County, VA	Warren County, VA
Culpeper County, VA	

The spending in the relevant geographic market area is represented in **Table 7-1**. The entire NAICS codes that made up WSSC Water’s product market are shown in **Appendix B**.

⁵⁵ Chapter 3, Market Area and Utilization Analyses

TABLE 7-1.
RELEVANT MARKET AREA ANALYSIS
DISTRIBUTION OF DOLLARS BY BUSINESS CATEGORY,
WSSC WATER MARKET AREA

CONSTRUCTION	Amount	Percent
<i>Inside MARKET AREA</i>	\$ 970,499,951.98	82.89%
Outside MARKET AREA	\$ 200,370,152.64	17.11%
CONSTRUCTION, TOTAL	\$ 1,170,870,104.62	100.00%
ARCHITECTURE & ENGINEERING	Amount	Percent
<i>Inside MARKET AREA</i>	\$ 237,367,762.43	95.79%
Outside MARKET AREA	\$ 10,427,758.96	4.21%
ARCHITECTURE & ENGINEERING, TOTAL	\$ 247,795,521.39	100.00%
PROFESSIONAL SERVICES	Amount	Percent
<i>Inside MARKET AREA</i>	\$ 99,612,629.65	46.54%
Outside MARKET AREA	\$ 114,407,795.92	53.46%
PROFESSIONAL SERVICES, TOTAL	\$ 214,020,425.57	100.00%
GOODS & SERVICES	Amount	Percent
<i>Inside MARKET AREA</i>	\$ 337,735,826.40	73.10%
Outside MARKET AREA	\$ 124,278,236.71	26.90%
GOODS & SERVICES, TOTAL	\$ 462,014,063.11	100.00%
ALL BUSINESS CATEGORIES	Amount	Percent
<i>Inside MARKET AREA</i>	\$ 1,645,216,170.46	78.54%
Outside MARKET AREA	\$ 449,483,944.23	21.46%
ALL BUSINESS CATEGORIES, TOTAL	\$ 2,094,700,114.69	100.00%

Finding B: M/WBE Utilization *(Chapter 3, Appendix C)*

In **Table 7-2**, the utilization analysis shows that non-M/WBE firms are utilized at higher rates than their M/WBE counterparts. WSSC Water’s utilization with non-M/WBE firms totaled 66.80 percent, while 33.20 percent went to M/WBE firms. Overall, the highest utilization rates among M/WBE classifications included African American firms accounting for 8.89 percent of dollars paid and nonminority females accounting for 8.82 percent of dollars paid. Further analyzing the individual procurement categories, African American firms had the greatest utilization among M/WBE firms in Goods & Services at 19.97 percent or \$92.24 million, followed by Asian American firms in Architecture & Engineering at 14.77 percent or \$36.59 million.⁵⁶

⁵⁶ Chapter 3, Market Area and Utilization Analyses

TABLE 7-2.
UTILIZATION ANALYSIS
BY BUSINESS OWNERSHIP CLASSIFICATION AND BY PROCUREMENT CATEGORIES

BUSINESS OWNERSHIP CLASSIFICATION	ALL	Construction	Architecture & Engineering	Professional Services	Goods & Services
African Americans	\$186,114,375.02	\$59,608,032.37	\$19,762,135.64	\$14,500,476.19	\$92,243,730.82
Asian Americans	\$152,173,372.36	\$82,671,083.79	\$36,592,200.17	\$13,997,684.86	\$18,912,403.54
Hispanic Americans	\$171,318,721.88	\$141,938,432.17	\$10,468,364.83	\$1,226,732.75	\$17,685,192.13
Native Americans	\$1,035,291.62	\$1,035,291.62	\$0.00	\$0.00	\$0.00
TOTAL MINORITY FIRMS	\$510,641,760.88	\$285,252,839.95	\$66,822,700.64	\$29,724,893.80	\$128,841,326.49
Nonminority Female Firms	\$184,855,431.93	\$132,523,411.82	\$7,429,400.40	\$7,987,604.94	\$36,915,014.77
TOTAL M/WBE FIRMS	\$695,497,192.81	\$417,776,251.77	\$74,252,101.04	\$37,712,498.74	\$165,756,341.26
TOTAL Non-M/WBE Firms	\$1,399,202,921.88	\$753,093,852.85	\$173,543,420.35	\$176,307,926.83	\$296,257,721.85
TOTAL FIRMS	\$2,094,700,114.69	\$1,170,870,104.62	\$247,795,521.39	\$214,020,425.57	\$462,014,063.11
BUSINESS OWNERSHIP CLASSIFICATION	ALL	Construction	Architecture & Engineering	Professional Services	Goods & Services
African Americans	8.89%	5.09%	7.98%	6.78%	19.97%
Asian Americans	7.26%	7.06%	14.77%	6.54%	4.09%
Hispanic Americans	8.18%	12.12%	4.22%	0.57%	3.83%
Native Americans	0.05%	0.09%	0.00%	0.00%	0.00%
TOTAL MINORITY FIRMS	24.38%	24.36%	26.97%	13.89%	27.89%
Nonminority Female Firms	8.82%	11.32%	3.00%	3.73%	7.99%
TOTAL M/WBE FIRMS	33.20%	35.68%	29.97%	17.62%	35.88%
TOTAL Non-M/WBE Firms	66.80%	64.32%	70.03%	82.38%	64.12%

Source: Chapter 3, Market Area and Utilization Analysis.

Finding C: Availability Estimates (Chapter 4, Appendix C)

A reliable estimation of the number of firms *willing* and *able* to provide each of the respective services under the examination scope is an incumbent element in the determination of disparity. Post-*Croson* case law has not prescribed a single approach to deriving firm availability, and agencies have used various means to estimate pools of available vendors that have withstood legal scrutiny.

MGT calculates availability based on a “custom census” approach. This approach is the most accurate for calculating availability at its most granular level. An in-depth explanation of this approach is provided in **Chapter 4**. Detailed availability results by business category and 4-digit NAICS code are provided in **Appendix C**. The availability estimates by procurement category are illustrated in **Table 7-3**.

TABLE 7-3.
ESTIMATION OF AVAILABLE FIRMS

BUSINESS OWNERSHIP CLASSIFICATION	ALL	Construction	Architecture & Engineering	Professional Services	Goods & Services
African Americans	12.39%	9.77%	14.42%	17.21%	15.71%
Asian Americans	8.73%	7.22%	18.31%	11.62%	6.09%
Hispanic Americans	9.88%	13.19%	7.38%	4.44%	5.35%
Native Americans	0.48%	0.29%	0.68%	0.43%	0.85%
TOTAL MINORITY FIRMS	31.48%	30.47%	40.78%	33.71%	28.00%
Nonminority Female Firms	15.58%	14.56%	14.78%	13.05%	19.75%
TOTAL M/WBE FIRMS	47.05%	45.03%	55.56%	46.75%	47.75%
TOTAL Non-M/WBE Firms	52.95%	54.97%	44.44%	53.25%	52.25%

Source: Chapter 4, Availability and Disparity Analysis.

Finding D: Disparity (Chapter 4)

This section includes the results of the disparity ratios calculated in **Chapter 4**. MGT’s disparity index methodology yields an easily calculable value, understandable in its interpretation, and universally comparable. A disparity in utilization within the minority- and female-owned firms can be assessed comparing the utilization of nonminority- and male-owned firms. MGT applies two significant tests to determine statistical significance: (1) whether the disparity index is less than or equal to 80 percent of respective M/WBE availability, which is labeled “substantial disparity,” and (2) whether the disparity index passes the t-test determination of statistical significance. In cases where one, or especially both, measures hold true, a remedy is typically deemed justifiable by courts, making these results critical outcomes of the subsequent analyses.

These overall results show that among M/WBE firms there remains disparity for all categories. Only in Goods & Services do you find no disparity for African American firms. Additionally, as a total M/WBE classification, all procurement categories find substantial and statistically significant disparity. Detailed disparity results by business category and 4-digit NAICS code are provided in **Appendix C**.

TABLE 7-4.
DISPARITY RATIO SUMMARY ANALYSIS

Procurement Category	All	Construction	Architecture & Engineering	Professional Services	Goods & Services
African Americans	Disparity	Disparity	Disparity	Disparity	No Disparity
Asian Americans	Disparity	Disparity	Disparity	Disparity	Disparity
Hispanic Americans	Disparity	Disparity	Disparity	Disparity	Disparity
Native Americans	Disparity	Disparity	Disparity	Disparity	Disparity
Total MBE Firms	Disparity	Disparity	Disparity	Disparity	Disparity
Nonminority Females	Disparity	Disparity	Disparity	Disparity	Disparity
Total M/WBE Firms	Disparity	Disparity	Disparity	Disparity	Disparity

BOLD indicates substantial statistically significant disparity.

Finding E: Private Sector Disparities in Census SBO and ABS Data *(Chapter 5)*

Based on US Census 2012 SBO and 2017 ABS data, MGT attempted to answer the research question; “Do marketplace disparities exist in the private sector regarding revenue within similar WSSC Water procurement categories for firms owned by minorities or females?”. Both data sets gather and report firm information for firms with paid employees, including workers on the payroll (employer firms). SBO data is the only data set that provides firms without paid employees, including sole proprietors and partners of unincorporated businesses that do not have any other employees on the payroll (nonemployer firms). This is an important distinction because it provides a more encompassing picture of the private sector. SBO is limited in the age of the data, but it can be supplemented with more recent ABS data. It should also be noted that all the disparity indices in the SBO tables are statistically significant within a 95 percent confidence interval.

According to the findings, the SBO and ABS data analysis show consistent underutilization of M/WBE firms relative to their availability in the marketplace. Further, each of the five procurement categories analyzed showed substantial disparity among defined M/WBE classes where sufficient data were available.

Finding F: Disparities In Individual Wages, Business Earnings, Self-Employment Rates *(Chapter 5)*

Findings from the Public Use Microdata Sample (PUMS) from 2015-2019 data indicate that minorities and women earn significantly less wages and business earnings than their nonminority male counterparts.

Additionally, the findings show that minorities and women have significantly lower formation rates than nonminority males. When these self-employment rates were stratified by race and by business type, trends varied within individual race-by-type cells, but disparities persisted, in general, for all minorities and nonminority females. These findings support the conclusion that discriminatory disparities for these groups (of adequate sample size to permit interpretation) were likely the result of differences in the marketplace due to race, gender, and ethnicity. Additionally, analysis of observed vs. predicted self-employment rates shows that there are instances that discrimination impacted these rates, and that business marketplace discrimination exists in the WSSC Water market.

Finding G: Qualitative and Anecdotal Results *(Chapter 6)*

The collective qualitative and anecdotal activities gathered input through vendor surveys, in-depth interviews, and community meetings, from over 1,600 business owners or representatives in the relevant market area regarding their opinions and perceptions of how discrimination has affected their experiences working with WSSC Water or with primes as subcontractors on WSSC Water projects. Of those that responded, 65 percent were minority and women-owned firms, with African American firms at 30 percent of those that participated, followed by Hispanic American firms making up 14 percent, Asian Americans firms making up 11 percent, nonminority female firms making up 10 percent, and Native American firms below 1 percent.

The evidence from the qualitative and anecdotal activities was consistent with the other evidence reported throughout this study. The evidence found that M/WBE firms face business-related discrimination in the relevant marketplace at substantially higher rates than non-M/WBEs. Additionally, the results show that M/WBE firms that were solicited for projects with M/WBE goals are seldom or never solicited for projects without goals. The relative lack of solicitation of M/WBEs in the absence of affirmative efforts by WSSC Water and other public entities in the relevant market area shows that business discrimination continues to be a barrier to M/WBE business opportunities. The qualitative evidence suggests that M/WBEs face discriminatory barriers to full and equitable participation in public and private sector contracts in the WSSC Water market.

7.3 Aspirational Goals Methodology

Current M/WBE aspirational goals and availability are outlined in **Table 7-5**. These estimates should provide the baseline starting point for updating the current aspirational goals. As indicated in Chapter 5, current levels of M/WBE availability are lower than they should be compared to their non-M/WBE counterparts due to marketplace discrimination. With current availability, the private sector formation rates can be used to update the aspirational goals. WSSC Water should first start with current M/WBE availability and determine, based on the private sector formation rates, and possibly utilization rates, if aspirational goals should be gradually updated upwards with the goal of eventually aligning with the availability results found in this study. This can be done in conjunction with programmatic policies and need. It should be noted that aspirational goals should not be applied rigidly to every individual WSSC Water procurement. Instead, M/WBE goals should vary from project to project.

TABLE 7-5.
CURRENT M/WBE GOALS AND AVAILABILITY

BUSINESS CATEGORY	CURRENT ASPIRATIONAL M/WBE GOALS	2022 DISPARITY STUDY M/WBE AVAILABILITY
Construction	13%	45%
Architecture & Engineering	24%	56%
Professional Services	23%	47%
Goods & Services	33%	48%

7.4 Selected Industry Practices

Many state and local government agencies have policies and practices that attempt to address marketplace discrimination and barriers faced by minority, women, and small business enterprises. Such assistance may include direct subsidies to businesses, funds for management and technical assistance to small and new entrepreneurs, mentor-protégé programs, diversity training, and bonding assistance, as well as collaboration with and support for organizations that provide management and technical assistance to businesses.

The following provides selected industry practices. Some have worked in certain localities, and some have not been as effective in others. Effectiveness can depend on a variety of factors. As such, it is difficult to determine whether a particular policy or practice is solely responsible for the success of a program.

Best Practice A: Small Business Prime Contracting Programs

Rotation of Bidders

Some political jurisdictions use rotation of bidder schemes to limit habitual purchases from majority firms and to ensure that all firms have an opportunity to bid along with majority firms. A number of agencies, including the City of Indianapolis, Indiana; Fairfax County, Virginia; the Port Authority of New York and New Jersey; and Miami-Dade County, Florida, use bid rotation to encourage utilization, particularly in architecture and engineering. Some examples of bidder rotation from these agencies include:

Metropolitan Sewer District of Greater Cincinnati (MSD). MSD’s Small Business Manager shall establish a Small Contract Rotation Pool for certified SBEs, including procedures applicable to construction, supplies/services, and professional services for contracts between \$5,000 and \$50,000. Each certified SBE is grouped by its commodity codes based on the type of business.⁵⁷

Miami-Dade County, Florida. Miami-Dade County uses small purchase orders for the Small Business Enterprise program and rotates on that basis. In addition, Miami-Dade County utilizes an Equitable

⁵⁷ Metropolitan Sewer District of Greater Cincinnati Small Business Enterprise Program Rules and Guidelines Section 4(F).

Distribution Program, whereby a pool of qualified architecture and engineering professionals are rotated awards of county miscellaneous architecture and engineering services as prime contractors and subcontractors.

Small Business Set-asides/Sheltered Markets

Miami-Dade County Government. On March 6, 2012, The Board of County Commissioners in Miami, Florida adopted Ordinance No. 12-13, which requires the County to shelter all purchases for goods and services valued up to \$100,000 for competition among certified SBE firms.

State of New Jersey. The State of New Jersey Small Business Set-Aside Program was established with the goal of awarding 25 percent of state contracting and purchase order dollars to small businesses.⁵⁸

At least 10 percent of the State contracts shall be awarded to small businesses whose gross revenues do not exceed \$500,000; at least an additional 15 percent shall be awarded to additional categories of small businesses whose gross revenues do not exceed \$12 million or the applicable Federal revenue standards.

State of Maryland (Small Business Reserve Program). Maryland's Small Business Reserve Program (SBR) provides prime contracting opportunities in an exclusive environment where small businesses compete against other small businesses. This race- and gender-neutral set aside program applies to 23 designated agencies that are required to spend at least 10 percent of their total fiscal year procurement expenditures with SBR vendors.⁵⁹

City of St. Petersburg, Florida. The City of St. Petersburg's Sheltered Market program is used when it is determined that there are sufficient SBEs to afford effective competition and where necessary to meet the annual city-wide goals for SBE participation, both for construction and the purchase of supplies and services.⁶⁰ For construction sheltered market contracts, SBE prime contractors or subcontractors collectively shall perform at least 20 percent of the contracting effort, including the costs of materials, goods and supplies, with their own organization and resources.

San Francisco Municipal Transportation Agency (SFMTA). SFMTA has established an SBE Set-Aside Program for Professional and Technical Services.

Race-neutral Joint Ventures

Atlanta, Georgia. The City of Atlanta requires establishment of joint ventures on large projects of over \$10 million.⁶¹ Primes are required to create a joint venture with a firm from a different ethnic/gender group in order to ensure prime contracting opportunities for all businesses. This rule applies to women- and minority-owned firms as well as nonminority firms. This rule has resulted in tens of millions of dollars in contract awards to women- and minority-owned firms.

⁵⁸ N.J.A.C. 17:13.

⁵⁹ (Md. Code Ann., State Fin. & Proc. Art. §14-501 – 14-505 (2011 Supp.))

⁶⁰ City of St. Petersburg Municipal Code Section 2-239 to 2-246 of Division 4, Article 5, Chapter 2.

⁶¹ City of Atlanta Ordinance Sec. 2-1450 and Sec. 2-1451.

Construction Management, Request for Proposals, and Design-build

One method of debundling in construction is through the use of multi-prime construction contracts in which a construction project is divided into several prime contracts which are then managed by a construction manager at risk (CM at Risk or CMAR). For example, this approach has been used on projects where each prime contractor is responsible for installation and repair in particular areas. The construction manager is responsible for obtaining materials at volume discounts based upon total agency purchases. If one contractor defaults, a change order is issued to another prime contractor working in an adjacent area. The construction manager at risk is responsible for cost overruns that result from prime contractor default.

Construction management also facilitates the rotation of contracts within an area of work. For example, if several subcontractors have the capacity of bidding on an extended work activity (e.g., concrete flat work, traffic control, hauling), the construction manager can rotate contracting opportunities over the duration of the activity.

Using a request for proposal process can provide the flexibility for including M/WBE participation in prime contractor requirements and selection. One of the nonfinancial criteria can be the proposer's approach and past history with M/WBE subcontractor utilization as well as women and minority workforce participation.

A number of agencies around the country, the Charlotte-Mecklenburg School System, Miami-Dade County Public Schools, the Tri-County Metropolitan Transportation District of Oregon, and the City of Columbia, SC, have implemented this approach.⁶²

The Colorado Department of Transportation (DOT) has required DBE and Emerging Small Business (ESB) performance plans for bidders on design-build projects. Colorado DOT achieved \$187 million in DBE utilization on the \$1.2 billion T-REX project using this approach.⁶³

SBE Prime Contractors Assistance

North Carolina Department of Transportation (NCDOT) Fully Operated Rental Agreements. Under these arrangements, a firm may bid an hourly rate for using certain equipment and the necessary staff. In these field-let contracts, engineers select the firm with the appropriate equipment and the lowest bid rate. If that firm is not available, the engineers select the next lowest hourly rate. This rental agreement technique is used primarily to supplement NCDOT equipment in the event of NCDOT equipment failure or peak demand for NCDOT services. The rental agreement technique is attractive to small contractors because the typical small firm has much better knowledge of its own hourly costs than it does of the costs to complete an entire project.

Florida Department of Transportation (Florida DOT) Business Development Initiative. The Florida DOT has undertaken a stepped-up small business initiative with the following principal components:

- ◆ Reserving certain construction, maintenance, and professional services contracts for small businesses.

⁶²Federal Transit Administration, Lessons Learned #45 (May 2002). www.fta.dot.gov/library/program/ll/man/ll45.html.

⁶³D. Wilson, Colorado Department of Transportation Statewide Transportation Disparity Study, 2009, at 3-20.

- ◆ Providing bid preference points to small businesses, and to firms offering subcontracts to small businesses on professional services contracts.
- ◆ Waiving performance and bid bond requirements for contracts under \$250,000.
- ◆ Using a modified pre-qualification process for certain construction and maintenance projects.

Best Practice B: Small Business Program for Subcontracts

Small Business Project Goals

Cook County Government (Illinois). In Cook County, the Compliance Contract Director (CCD), following the compilation and stringent review of the most current data that is feasibly and practicably available relative to the availability of MBEs and WBEs who have the capacity to successfully supply the relevant goods and services, and in consultation with the User Agency, shall establish Project Specific Goals for construction, which shall be incorporated into each bid and RFP.⁶⁴

Sacramento Municipal Utility District (SMUD). All prime bids that include 20 percent SBE subcontract utilization with Supplier Education and Economic Development (SEED) vendors will receive a 5 percent bid preference (capped at \$250,000) and 10 points on RFP evaluations. Proposals with less than 20 percent SBE subcontract utilization are awarded a 5 percent bid preference on the part of their bid that includes SBE subcontractors.

City of Charlotte, North Carolina. The City of Charlotte, which includes public utilities, has a comprehensive SBE program including SBE set asides and business assistance.⁶⁵ In addition, the City sets department goals for SBE utilization, sets SBE goals on formal and informal contracts, and makes SBE utilization part of department performance review utilization numbers. The City has a waiver provision for bidders but has rejected bids for bidder noncompliance with the SBE program. Charlotte achieved 28.9 percent M/WBE subcontractor utilization in construction and 33.1 percent M/WBE subcontractor utilization in architecture and engineering through small business subcontracting goals.⁶⁶

Best Practice C: Inclusion in Financial and Professional Services

Port Authority of New York and New Jersey. The Port Authority has encouraged the use of S/M/WBEs in finance through its financial advisory call-in program which targets small firms to serve as a pool of advisors for the Port Authority Chief Financial Officer. The financial advisors address debt issuance, financial advisory services, real estate transactions, and green initiatives. There are three to four firms in each of these categories in the financial advisory call-in program.

The Port Authority of New York and New Jersey's Specialty Insurance Program sets aside five sets of insurance policies to small brokers, and the Port's Financial Advisors Call In program pre-qualifies small

⁶⁴ Cook County Ord. No. 14-1232, 3-12-2014; Ord. No. 16-3598, 6-29-2016; Ord. No. 17-3217, 6-7-2017.

⁶⁵ A description of the Charlotte SBE program can be found at www.charmeck.org/Departments/Economic+Development/Small+Business/Home.htm.

⁶⁶ MGT, The City of Charlotte Update Disparity Study, 2011, Exhibit 7-1.

firms for task orders in financial advisory services, real estate transactions, debt issuance, and green initiatives.

Best Practice D: Combined Race-neutral and Race-conscious Programs

A number of agencies (Tampa, Florida; Hillsborough County, Florida; Jacksonville, Florida; Port Authority of New York and New Jersey; and State of Connecticut) combine race neutral and race conscious program features.

City of St. Paul, Minnesota. The City of Saint Paul Vendor Outreach program requires that contractors document their solicitation of bids from SBEs, MBEs, and WBEs, in addition to listing subcontracting opportunities, attending pre-bid conferences and seeking assistance from M/WBE organizations. St. Paul achieved 10.4 percent SBE spending (out of \$113.2 million in total spending). In the SBE program, 62.5 percent of SBE spending went to WBEs, 21.2 percent to nonminority males and 16.3 percent to MBEs.

San Francisco Bay Area Rapid Transit (BART). BART's goal is to determine the race neutral and race conscious portions of a particular goal and to attain as much of the goal by race neutral means as possible. The basis for BART's methodology centers on the past level of race-neutral DBE attainment and the past level of race-conscious DBE attainment. The race neutral DBE attainment stems from either DBE prime contractors or from DBE participation as subcontractors on contracts without DBE goals.

City and County of Durham develop and use race- and gender-neutral measures to facilitate the participation of Underutilized Business Enterprise⁶⁷ (UBEs) in city contracting activities. These measures may include but are not limited to: (1) Arranging solicitation times for the presentations of bids, quantities, specifications, and delivery schedules so as to facilitate the participation of interested persons. (2) Providing timely information on contracting procedures, bid preparation, and specific contracting opportunities. (3) Holding pre-bid conferences, where appropriate, to explain the projects and to encourage potential bidders to solicit available UBEs as subcontractors or as joint venturers. (4) Adopting prompt payment procedures, including requiring by contract that contractors pay their direct subcontractors within a stated period of receipt of payment from the city, subject to appropriate exceptions. (5) Reviewing bonding and insurance requirements to eliminate unnecessary barriers to contracting with the city. (6) Maintaining a bidders list, consisting of all persons bidding on city prime contracts and bidding or quoting on city-funded subcontracts. (7) Providing technical assistance.

Best Practice E: Outreach

New York Con Edison. Con Edison partnered with the National Minority Supplier Development Council's Corporate Plus Program to identify M/WBEs with the experience and capacity to provide goods and services to Con Edison. Con Edison's new vendors have provided services in nontraditional areas of opportunity, such as dry-ice blasting, real-estate, environmental remediation, gas pipe, and fuel. Con Edison also co-hosted the Minority Supplier Development Council's Sustainability Summit to recruit

⁶⁷ The City of Durham will consider a formal certification of the State of North Carolina's Historically Underutilized Businesses (HUB) Office, North Carolina Department of Transportation (N.C. DOT) minority and women businesses and the United States Small Business Administration (U.S. SBA) 8(a) Development Program as UBEs.

M/WBEs who provide energy-efficient and environmentally friendly goods and services. Finally, Con Edison supported the Construction Mentorship Program, a nine-month executive education program for M/WBEs. Con Edison reported spending over \$1.5 billion with M/WBEs from 2008 to 2012.

Florida State Minority Supplier Development Council (FSMSDC). In 2018, FSMSDC in conjunction with various private and public organizations hosted its annual Business Expo designed to provide minority-owned and small business enterprises with technical assistance as well as networking opportunities. The Business Expo featured hundreds of business appointments, workshops, and industry group gathering. Programming included the following:

1. Loan-A-Thon Financing for Business Growth: Vendors met one-on-one with bankers and alternative lenders.
2. Elevator Pitch Competition
3. Buyers and Sellers Lounge
4. Master Classes
5. CEO Forum
6. B2B Trade Fair
7. Youth Entrepreneur Workshops

Appendix A

A. Legal Review

Introduction

The Supreme Court decisions in *Richmond v. J. A. Croson Co. (Croson)*,⁶⁸ and *Adarand v. Peña (Adarand III)*⁶⁹ established and applied the legal framework that governs race- and gender-conscious procurement programs. These cases held that strict scrutiny should be the standard by which race-conscious governmental programs should be reviewed, including programs of federal, state, and local governments. In particular, the courts held that to survive a constitutional challenge under a strict scrutiny standard, a race-conscious governmental procurement program must be (1) justified by a compelling governmental interest in remedying identified discrimination in the marketplace; and (2) narrowly tailored to remedy that discrimination. Decisions of the Fourth Circuit offer the most directly binding authority to WSSC Water, particularly the decision involving the North Carolina Department of Transportation's (NCDOT) M/WBE program in *H.B. Rowe Co., Inc. v. Tippett (Rowe)*.⁷⁰ Other circuit court cases outside of the Fourth Circuit offer persuasive authority where the Fourth Circuit does not directly address all aspects of a legally defensible M/WBE program. This review also addresses the most pertinent cases outside of the Fourth Circuit.

Scrutiny Standards for Race- and Gender-Specific Programs

Strict Scrutiny - *Richmond v. J. A. Croson Co. as Applied to State and Local Governments*

Justice O'Connor in *Croson* established the framework for testing the validity of race-based programs in state and local governments. In 1983, the Richmond City Council (Council) adopted a Minority Business Utilization Plan (the Plan). In adopting the Plan, the Council relied on information that showed that there was, "no direct evidence of race discrimination on the part of the city" in its contracting activities and no "evidence that the city's prime contractors had discriminated against minority-owned subcontractors."⁷¹

The Plan required the city's prime contractors to subcontract at least 30 percent of the dollar amount of each contract to one or more minority-owned business enterprises (MBEs). The Plan did not establish any geographic limits for eligibility. Therefore, an otherwise qualified MBE from anywhere in the United States could benefit from the 30 percent set-aside.

J.A. Croson Company, a non-MBE mechanical plumbing and heating contractor, filed a lawsuit against the city of Richmond, alleging that the Plan was unconstitutional because it violated the Equal Protection

⁶⁸ *Richmond v. J. A. Croson Co.*, 488 U.S. 469 (1989). It should be noted that as it relates to this analysis, *Croson* refers to the Court's opinion delivered by Justice O'Connor in Parts I, III-B, and IV. Parts II, III-A, and V were plurality opinions delivered by Justice O'Connor.

⁶⁹ *Adarand Constructors v. Peña*, 515 U.S. 200 (1995).

⁷⁰ *H.B. Rowe Co., Inc. v. Tippett*, 615 F.3d 233 (4th Cir. 2010).

⁷¹ *Croson*, 488 U.S. at 480.

Clause of the Fourteenth Amendment of the United States Constitution. After a considerable record of litigation and appeals, the Fourth Circuit Court of Appeals struck down the Richmond Plan, and the Supreme Court affirmed this decision.⁷² The Supreme Court determined that strict scrutiny was the appropriate standard of judicial review for MBE programs, which means that a race-conscious program must be based on a compelling governmental interest and be narrowly tailored to achieve its objectives. This standard requires a firm evidentiary basis for concluding that the underutilization of minorities is a product of past discrimination.⁷³

Intermediate Scrutiny - *H.B. Rowe Co., Inc. v. Tippett*

The Supreme Court has not addressed the specific issue of a gender-based classification in the context of a woman-owned business enterprise (WBE) program. *Croson* was limited to the review of an MBE program. In evaluating gender-based classifications, the Court has used what some call “intermediate scrutiny,” a less stringent standard of review than the “strict scrutiny” applied to race-based classifications. Intermediate scrutiny requires that classifying persons based on sex “must carry the burden of showing an exceedingly persuasive justification for the classification.”⁷⁴

The Fourth Circuit has ruled that the intermediate scrutiny standard is satisfied “by showing at least that the classification serves important governmental objectives and that the discriminatory means employed are substantially related to the achievement of those objectives.”⁷⁵ The Fourth Circuit in *Rowe* agreed with other federal circuits that intermediate scrutiny “can rest safely on something less than the ‘strong basis in evidence’.”⁷⁶ This “something less can mean that the statute must ‘present[] sufficient probative evidence in support of its stated rationale for enacting a gender preference, i.e., . . . the evidence [must be] sufficient to show that the preference rests on evidence-informed analysis rather than on stereotypical generalizations.’”⁷⁷

Strict Scrutiny Analysis

Although Justice O’Connor in *Croson* did not specifically define the methodology used to establish the evidentiary basis required by strict scrutiny, the Court outlined governing principles. Lower courts have expanded the Supreme Court’s *Croson* guidelines and have applied or distinguished these principles when asked to decide the constitutionality of state, county, and city programs to enhance opportunities for minorities and women.

Compelling Governmental Interest

Croson identified two necessary factors for establishing racial discrimination sufficiently to demonstrate a compelling governmental interest in establishing an MBE program. First, there needs to be identified

⁷² *Id.* at 511.

⁷³ *Id.* at 488.

⁷⁴ *Miss. Univ. for Women v. Hogan*, 458 U.S. 718, 724 (1982). See also *Kirchberg v. Feenstra*, 450 U.S. 455, 461 (1981); *Pers. Adm’r of Mass. v. Feeney*, 442 U.S. 256, 273 (1979).

⁷⁵ *Hogan*, 458 U.S. at 724 (internal quotation marks omitted). *H.B. Rowe Co., Inc. v. Tippett*, 615 F.3d 233, 242 (4th Cir. 2010).

⁷⁶ *Id.*; see also *Concrete Works of Colo. v. City & County of Denver (Concrete IV)*, 321 F.3d 950, 959-60 (10th Cir. 2003); *Contractors Ass’n of E. Pa. v. City of Phila.*, 6 F.3d 990, 1010 (3d Cir. 1993); *Coral Constr. Co. v. King County*, 941 F.2d 910, 931-32 (9th Cir. 1991); *H.B. Rowe Co., Inc. v. Tippett*, 615 F.3d 233, 242 (4th Cir. 2010).

⁷⁷ *Engineering Contrs. Ass’n v. Metropolitan Dade County*, 122 F.3d 895, 910 (11th Cir. 1997); *Concrete Works IV*, 321 F.3d at 959; *H.B. Rowe Co., Inc. v. Tippett*, 615 F.3d 233, 242 (4th Cir. 2010).

discrimination in the relevant market.⁷⁸ Second, “the governmental actor enacting the set-aside program must have somehow perpetuated the discrimination to be remedied by the program,”⁷⁹ either actively or at least passively with “the infusion of tax dollars into a discriminatory industry.”⁸⁰

Statistical Evidence

The Court in *Croson* indicated that the proper statistical evaluation would compare the percentage of qualified MBEs in the relevant market with the percentage of total municipal construction dollars awarded to them.⁸¹ In *Croson*, Justice O’Connor recognized statistical measures of disparity that compared the number of qualified and available M/WBEs with the rate of state construction dollars actually awarded to M/WBEs to demonstrate discrimination in the local construction industry.⁸² To meet this more precise requirement, courts, including the Fourth Circuit, have accepted the use of a disparity index.⁸³

Availability

M/WBEs are deemed to be “available” if they are ready, willing, and able to perform. In determining availability of M/WBEs, the approach utilized to assess the universe of available firms should neither be too overinclusive or underinclusive. The “Custom Census” approach for identifying the pool of available firms has been favorably approved by several courts. In *Northern Contracting*, the plaintiff attempted to argue that the Illinois Department of Transportation IDOT miscalculated the number of DBEs by using a custom census instead of a count of the number of DBEs registered and prequalified by IDOT. The Seventh Circuit upheld the broader custom census count of DBEs, concluding that it reflected an attempt by IDOT to arrive at more accurate numbers than what would be possible through a use of the registered vendors list.⁸⁴

Relevant Market Area

Another issue in availability analysis is the definition of the relevant market area. Specifically, the question is whether the relevant market area should be defined as the area from which a specific percentage of purchases are made, the area in which a specific percentage of qualified, willing, and able contractors may be located, or the area determined by a fixed geopolitical boundary.

The Supreme Court has not yet established how the relevant market area should be defined, and the relevant market was not directly addressed in *H.B. Rowe*. However, the study in *Rowe* defined the relevant market as the area in which the agency spent 75 percent of the dollars with vendors in a particular procurement category.⁸⁵

⁷⁸ *Croson*, 488 U.S. at 492, 509-10.

⁷⁹ *Coral Const. Co. v. King County*, 941 F.2d 910, 916 (9th Cir. 1991).

⁸⁰ *Id.* at 922.

⁸¹ *Croson*, 488 U.S. at 501-02.

⁸² *Id.* at 503-04.

⁸³ *H.B. Rowe, Inc. v. Tippet*, 615 F.3d 233, 243-44 (4th Cir. 2010). *See also Engineering Contractors*, 122 F.3d at 914; *Concrete Works IV*, 321 F.3d at 962-67.

⁸⁴ *N. Contracting, Inc. v. Illinois*, 473 F.3d 715, 723 (7th Cir. 2007).

⁸⁵ *H.B. Rowe Co., Inc. v. Tippet*, 615 F.3d 233 (4th Cir. 2010) and 2004 MGT’s North Carolina Department of Transportation Second Generation Disparity Study page 4-10.

Ability

Another availability consideration is whether the firms being considered are able to perform a particular service. Those who challenge affirmative action often question whether M/WBE firms have the “capacity” to perform specific services. In *Rowe*, the court noted that capacity does not have the same force for relatively small subcontracts. In addition, the study for NCDOT contained a regression analysis indicating that “African American ownership had a significant negative impact on firm revenue unrelated to firm capacity or experience.”⁸⁶

In *Concrete Works IV* the court noted that “MWBE construction firms are generally smaller and less experienced because of discrimination....Additionally, we do not read *Croson* to require disparity studies that measure whether construction firms are able to perform a particular contract.”⁸⁷

Disparity Index

In the *Rowe* decision, the plaintiff noted that there was no substantial disparity when the percentage of subcontractors was used compared to their availability. However, the Fourth Circuit stated that “[t]he State pointed to evidence that prime contractors used minority businesses for low-value work in order to comply with the Department’s goals.”⁸⁸ Along these lines, the Fourth Circuit noted that the average subcontract awarded to nonminority male subcontractors was more than double the size of subcontracts won by MBE subcontractors.⁸⁹

Statistical Significance in Disparity Studies

While courts have indicated that anecdotal evidence may suffice without statistical evidence, no case without statistical evidence has been given serious consideration by any circuit court. In practical effect, courts require statistical evidence. Further, the statistical evidence needs to be held to appropriate professional standards.⁹⁰ In *Rowe*, the court noted that the NCDOT study focused on disparity ratios lower than 80 percent and conducted t-tests of statistical significance.⁹¹

Burden of Proof

The *Croson* decision imposes the original burden of proof upon the government to demonstrate that a challenged DBE program is supported by documented evidence of past discrimination or current discrimination. The plaintiff then has the burden to prove that the DBE program is unconstitutional through various methods such as the flawed methodology used by the government to show that past or present discrimination exists, the race-neutral reasons for the disparity, or the existence of controverting data.⁹²

⁸⁶ *Id.*

⁸⁷ *Concrete Works IV*, 321 F.3d 950, 981, 983 (10th Cir. 2003).

⁸⁸ *H.B. Rowe., Inc. v. Tippett*, 615 F.3d at 243-244.

⁸⁹ *Id.* at 245.

⁹⁰ *Contractors Ass’n v. City of Philadelphia*, 91 F.3d 586, 603 (3d Cir. 1996).

⁹¹ *H.B. Rowe., Inc. v. Tippett*, 615 F.3d at 245.

⁹² *See, e.g., Concrete Works of Colo. v. City & County of Denver*, 321 F.3d 950, 959 (10th Cir. 2003), citing *Wygant v. Jackson Bd. of Education*, 476 U.S. 267, 277-78 (1986) (“The ultimate burden remains with the [plaintiff] to demonstrate the unconstitutionality of an affirmative-action program”).

Staleness of Data and Time Period of Study

A few cases have addressed the issue of the quantity and currentness of the data required to satisfy strict scrutiny. There is no clear guidance from the district courts about how many years should be studied, although there is cautionary language in cases about relying on small data samples.⁹³ Concerning the age of data, the court in *Rothe* ruled that the data relied on in the disparity studies was not stale with regard to reenacting a federal program in 2006. While agencies should rely on the most current available data, other circuit courts have “relied on studies containing data more than five years old when conducting compelling interest analyses.”⁹⁴

Passive Participation to Discrimination

In *Croson*, Justice O’Connor stated, “It is beyond dispute that any public entity, state or federal, has a compelling interest in assuring that *public* dollars, drawn from the tax contributions of all citizens, do not serve to finance the evil of *private* prejudice.”⁹⁵ *Croson* provided that the government “can use its spending powers to remedy private discrimination, if it identifies that discrimination with the particularity required by the Fourteenth Amendment.”⁹⁶ The government agency’s active or passive participation in discriminatory practices in the marketplace may show a compelling interest. Defining passive participation, *Croson* stated, “Thus, if the city could show that it had essentially become a ‘passive participant’ in a system of racial exclusion practiced by elements of the local construction industry, we think it clear that the city could take affirmative steps to dismantle such a system.”⁹⁷

Relying on this language in *Croson*, several local agencies have increased their emphasis on evidence of discrimination in the private sector. This strategy has not always succeeded. Evidence of private discrimination presented in litigation was found inadequate in the Philadelphia and Miami-Dade County cases⁹⁸ The Third Circuit stated, in discussing low MBE participation in a local contractors association in the city of Philadelphia, “racial discrimination can justify a race-based remedy only if the City has somehow participated in or supported that discrimination.”⁹⁹ Nevertheless, in *Concrete Works IV*, the Tenth Circuit upheld the relevance of data from the private marketplace to establish a factual predicate for M/WBE programs.¹⁰⁰ The courts mainly seek to ensure that M/WBE programs are based on active or passive discrimination findings in the government contracting marketplace and not simply attempts to remedy general societal discrimination¹⁰¹.

Courts also seek to find a causal connection between a statistical disparity and actual underlying discrimination. In *Engineering Contractors*, one component of the factual predicate was a study comparing entry rates into the construction business for M/WBEs and non-M/WBEs.¹⁰² The analysis provided

⁹³ See, e.g., *Associated Gen. Contrs. of Am. v. City of Columbus*, 936 F.Supp. 1363, 1393 (S.D. Ohio 1996) (*rev’d on other grounds*, 172 F.3d 411).

⁹⁴ *Rothe Dev. Corp. v. DOD*, 545 F.3d 1023, 1038 (Fed. Cir. 2008) (citing district court discussion of staleness in *W. States Paving Co. v. Wash. State DOT*, 407 F.3d 983 (9th Cir. 2005) and *Sherbrooke Turf, Inc. v. Minn. DOT*, 345 F.3d 964 (8th Cir. 2003)).

⁹⁵ *Coral Cons Co.*, 941 F.2d at 922 (citing *Croson*, 488 U.S. at 492) (emphasis added).

⁹⁶ *Croson*, 488 U.S. at 492; see generally Ian Ayres and Fredrick E. Vars, *When Does Private Discrimination Justify Public Affirmative Action?* 98 *Colum. L. Rev.* 1577 (1998).

⁹⁷ *Croson*, 488 U.S. at 492.

⁹⁸ *Contractors Ass’n*, 91 F.3d at 602; *Engineering Contrs. Ass’n v. Metropolitan Dade County*, 122 F.3d 895, 910-11 (11th Cir. 1997).

⁹⁹ *Contractors Ass’n*, 91 F.3d at 602; see also *Webster v. Fulton County*, 51 F. Supp. 2d 1354 (N.D. Ga. 1999).

¹⁰⁰ *Concrete Works IV*, 321 F.3d at 969.

¹⁰¹ *Adarand Constructors, Inc. v. Slater*, 228 F.3d 1147 (10th Cir. 2000).

¹⁰² *Engineering Contrs. Ass’n v. Metropolitan Dade County*, 122 F.3d at 921-22.

statistically significant evidence that minorities and women entered the construction business at rates lower than expected, given their numerical presence in the population and human and financial capital variables. The study argued that those disparities persisting after applying appropriate statistical controls were most likely the result of current and past discrimination. Even so, the Eleventh Circuit criticized this study for reliance on general census data and the lack of particularized evidence of active or passive discrimination by Miami-Dade County, holding that the district court was entitled to find that the evidence did not show compelling justification for an M/WBE program.¹⁰³

The Seventh Circuit has perhaps set a higher bar for connecting private discrimination with government action. In the Cook County case, the trial court extensively considered evidence that prime contractors did not solicit M/WBEs as subcontractors and considered carefully whether this evidence on solicitation served as sufficient evidence of discrimination, or whether instead, it was necessary to provide further evidence that there was discrimination in hiring M/WBE subcontractors.¹⁰⁴ The Seventh Circuit held that this evidence was largely irrelevant.¹⁰⁵ Beyond being anecdotal and partial, evidence that contractors failed to solicit M/WBEs on Cook County contracts was not the same as evidence that M/WBEs were denied the opportunity to bid.¹⁰⁶ Furthermore, such activities on the part of contractors did not necessarily implicate the County as being a passive participant in such discrimination as might exist because there was no evidence the County knew about it.¹⁰⁷

Anecdotal Evidence

Justice O'Connor in *Croson* discussed the relevance of anecdotal evidence, stating: “[E]vidence of a pattern of individual discriminatory acts can, if supported by appropriate statistical proof, lend support to a local government’s determination that broader remedial relief is justified.”¹⁰⁸

There was evidence from a telephone survey, interviews, and focus groups in *Rowe*. The Fourth Circuit favorably cited survey evidence of a good old boys’ network excluding MBEs from work, double standards in qualifications, primes viewing MBEs as less qualified, dropping MBEs after contract award, and the firms changing their behavior when not required to use MBEs. This material was affirmed in interviews and focus groups. The Fourth Circuit also concluded that “[t]he surveys in the 2004 study exposed an informal, racially exclusive network that systematically disadvantaged minority subcontractors.”¹⁰⁹

The plaintiff argued that this data was not verified, to which the Fourth Circuit responded, “a fact finder could very well conclude that anecdotal evidence need not— and indeed cannot—be confirmed because it ‘is nothing more than a witness’ narrative of an incident told from the witness’ perspective and including the witness’ perceptions.”¹¹⁰ The Fourth Circuit also commented favorably on the NCDOT study survey oversampling MBEs as long as the sample was random.

¹⁰³ *Id.* at 922.

¹⁰⁴ *Builders Ass’n of Greater Chicago v. County of Cook*, 123 F. Supp. 2d 1087 (N.D. Ill. 2000).

¹⁰⁵ *Builders Ass’n of Greater Chicago v. County of Cook*, 256 F.3d 642, 645 (7th Cir. 2001).

¹⁰⁶ *Id.*

¹⁰⁷ *Id.*

¹⁰⁸ *Croson*, 488 U.S. at 509.

¹⁰⁹ *H.B. Rowe*, 615 F.3d at 251.

¹¹⁰ *Id.* at 249 (quoting *Concrete Works*, 321 F.3d at 989).

In *Associated General Contractors of California, Inc. v. Coalition for Economic Equity (AGCC II)*, the Ninth Circuit discussed the specificity of anecdotal evidence required by *Croson*.¹¹¹ Seeking a preliminary injunction, the contractors contended that the evidence presented by San Francisco lacked the specificity needed for an earlier appeal in that case and by *Croson*.¹¹² The court held that the City's findings were based on substantially more evidence than the anecdotes in the two prior cases and were "clearly based upon dozens of specific instances of discrimination that are laid out with particularity in the record, as well as significant statistical disparities in the award of contracts."¹¹³

The court also ruled that the City was under no burden to identify every instance of discriminatory practices or policies.¹¹⁴ Reiterating the City's perspective, the court stated that the City "must simply demonstrate the existence of past discrimination with specificity; there is no requirement that the legislative findings specifically detail each instance that the legislative body ha[d] relied upon in support of its decision that affirmative action is necessary."¹¹⁵ Not only have courts found that a municipality does not have to identify all the discriminatory practices impeding M/WBE utilization specifically, but the Tenth Circuit in *Concrete Works IV* also held that anecdotal evidence collected by a municipality does not have to be verified. "There is no merit to [the plaintiff's] argument that the witnesses' accounts must be verified to provide support for Denver's burden. Anecdotal evidence is nothing more than a witness' narrative of an incident told from the witness' perspective and including the witness' perceptions....Denver was not required to present corroborating evidence and [the plaintiff] was free to present its own witnesses to either refute the incidents described by Denver's witnesses or to relate their own perceptions on discrimination in the Denver construction industry."¹¹⁶

Narrowly Tailoring

Many courts have held that even if a compelling interest for the M/WBE program can be found, the program can still be found not to be narrowly tailored.¹¹⁷ The Fourth Circuit has laid out the following factors in determining whether or not a program was narrowly tailored:

*(1) the necessity of the policy and the efficacy of alternative race neutral policies; (2) the planned duration of the policy; (3) the relationship between the numerical goal and the percentage of minority group members in the relevant population; (4) the flexibility of the policy, including the provision of waivers if the goal cannot be met; and (5) the burden of the policy on innocent third parties.*¹¹⁸

In *H.B. Rowe*, the Fourth Circuit added to this list "overinclusiveness," defined as the "tendency to benefit particular minority groups that have not been shown to have suffered invidious discrimination."¹¹⁹

¹¹¹ *AGCC II*, 950 F.2d 1401, 1414-15 (9th Cir. 1991).

¹¹² *Id.* at 1415-1416.

¹¹³ *Id.* at 1416. This evidence came from 10 public hearings and "numerous written submissions from the public." *Id.* at 1414.

¹¹⁴ *Id.* at 1416 n.11.

¹¹⁵ *Id.* at 1416.

¹¹⁶ *Concrete Works IV*, 321 F.3d 950, 989 (10th Cir. 2003).

¹¹⁷ *Contractors Ass'n v. City of Philadelphia*, 91 F.3d at 605; *Engineering Contrs.*, 122 F.3d at 926-29; *Virdi v. Dekalb County Sch. Dist.*, 135 F. App'x 262 (11th Cir. 2005).

¹¹⁸ *H.B. Rowe*, 615 F.3d at 252 (quoting *Belk v. Charlotte-Mecklenburg Bd. of Educ.*, 269 F.3d 305, 344 (4th Cir. 2001)).

¹¹⁹ *H.B. Rowe*, 615 F.3d at 252 (quoting *Alexander v. Estep*, 95 F.3d 312, 316 (4th Cir. 1996)).

Race-Neutral Alternatives

Concerning race-neutral alternatives, Justice O'Connor in *Croson* concluded that a governmental entity should also evaluate the use of race-neutral means to increase minority business participation in contracting or purchasing activities. In *Rowe*, the Fourth Circuit noted that NCDOT had a Small Business Enterprise program and had undertaken all the race-neutral methods suggested by the DOT DBE program regulations. The court pointed out that the plaintiff had identified “no viable race-neutral alternatives that North Carolina has *failed* to consider and adopt”¹²⁰ (emphasis in the original). The Court further noted that disparities persisted despite NCDOT employing these race-neutral initiatives.

Duration of the Remedy

Concerning program duration, in *Adarand v. Peña*, the Supreme Court wrote that a program should be “appropriately limited such that it ‘will not last longer than the discriminatory effects it is designed to eliminate.’”¹²¹ In *Rowe*, the Fourth Circuit stated that “the district court found two facts compelling in establishing that it was narrowly tailored: the statute’s provisions (1) setting a specific expiration date and (2) requiring a new disparity study every 5 years.... We agree.”¹²² Other appellate courts have noted possible mechanisms for limiting program duration: required termination if goals have been met¹²³, decertification of MBEs who achieve certain levels of success, or mandatory review of MBE certification at regular, relatively brief periods.¹²⁴

Relationship of Goals to Availability

Narrow tailoring under the *Croson* standard requires that remedial goals be in line with measured availability. Setting percentages arbitrarily have played a vital part in finding programs unconstitutional, as evident with what the city of Richmond did in *Croson*. Numerical goals should be based on statistical studies.¹²⁵

In *H.B. Rowe*, the Fourth Circuit found that NCDOT participation goals were related to percentage MBE availability. First, the NCDOT goals were set project by project. Second, NCDOT generates a report detailing the type of work likely to be subcontracted. Third, the NCDOT goal-setting committee checks its database for availability. Finally, the Fourth Circuit noted that 10 percent of the NCDOT projects had a zero M/WBE goal.¹²⁶

Flexibility

In *H.B. Rowe*, the Fourth Circuit agreed with the ruling of the federal district court in the case that the NCDOT M/WBE program was flexible, stating that “unlike the City of Richmond’s unconstitutional set-aside program in *Croson*, North Carolina’s statutory scheme does not mandate that specific percentages

¹²⁰ *H.B. Rowe*, 615 F.3d at 252.

¹²¹ *Adarand Constructors v. Peña*, 515 U.S. 200, 238 (1995) (citations omitted).

¹²² *H.B. Rowe*, 615 F.3d at 253 (citing *H.B. Rowe, Inc.*, 589 F. Supp. 2d at 597).

¹²³ *Sherbrooke Turf, Inc.*, 345 F.3d at 972.

¹²⁴ *Adarand Constructors, Inc. v. Slater*, 228 F.3d 1147, 1179-80 (10th Cir. 2000).

¹²⁵ *Contractors Ass’n v. City of Philadelphia*, 91 F.3d at 607 (“The district court also found significant that the ... Ordinance offered only one reference point for the percentages selected for the various set-asides -- the percentages of minorities and women in the general population”). See also *Builders Ass’n of Greater Chicago*, 256 F.3d at 647.

¹²⁶ *H.B. Rowe*, 615 F.3d at 253.

of subcontracting dollars always be apportioned to minority groups or women. Rather, the statute *prohibits* the Department from setting project-specific participation goals ‘rigidly.’”¹²⁷

In contrast, the Third Circuit observed in *Contractors Association* that, “[a]s we have explained, the 15 percent participation goal and the system of presumptions, which in practice require non-black contractors to meet the goal on virtually every contract, result in a 15% set-aside for black contractors in the subcontracting market.”¹²⁸

The Fourth Circuit also noted that, “*the State does not require or expect the prime contractor to accept any bid from an unqualified bidder, or any bid that is not the lowest bid. Moreover, prime contractors can bank any excess minority participation for use against future goals over the following two years.*”¹²⁹

Burden on Third Parties

Narrow tailoring also requires minimizing the burden of the program on third parties through the use of waivers. Good faith compliance is a tool that serves the purpose of reducing the burden on third parties.¹³⁰ The plaintiff in *Rowe* argued that the solicitation requirements were burdensome and that it was forced to subcontract out work that could be self-performed. The Fourth Circuit noted that the solicitation requirements could be met with existing staff, and the M/WBE program did not require subcontracting out work that could be self-performed.¹³¹

Over-inclusion

Finally, narrow tailoring involves limiting the number and type of program beneficiaries. As noted above, there must be evidence of discrimination to justify a group-based remedy, and over-inclusion of uninjured individuals or groups can endanger the entire program. In essence, there must be sufficient statistical evidence of discrimination to include a particular minority group in the remedial program. In *Croson*, the Court noted that “[i]f a 30% set-aside was “narrowly tailored” to compensate black contractors for past discrimination, one may legitimately ask why they are forced to share this “remedial relief” with an Aleut citizen who moves to Richmond tomorrow? The gross over inclusiveness of Richmond’s racial preference strongly impugns the city’s claim of remedial motivation.”¹³²

The statistical evidence that was evaluated by the court to determine if the Statute’s definition of minorities was determined to be overinclusive by including groups for which the 2004 disparity study did not establish sufficient evidence of discrimination. Although, the statute in question limited relief to “those racial or ethnicity classifications . . . that have been subjected to discrimination in the relevant marketplace and that have been adversely affected in their ability to obtain contracts with the Department”¹³³ lumping all minority groups together may provide preference for groups where no discrimination was found.

¹²⁷ *Id.* at 256.

¹²⁸ *Contractors Ass’n*, 91 F.3d at 606.

¹²⁹ *H.B. Rowe*, 615 F.3d at 253-54.

¹³⁰ 49 C.F.R. § 26.53.

¹³¹ *H.B. Rowe*, 615 F.3d at 254.

¹³² *Croson*, 488 U.S. at 506.

¹³³ N.C. Gen. Stat. § 136-28.4(c)(2).

Conclusions

As summarized earlier, when governments develop and implement a contracting program sensitive to race and gender, they must understand the case law developed in the federal courts. These cases establish specific requirements that must be addressed so that such programs can withstand judicial review for constitutionality and prove to be just and fair. Given current trends in applying the law, local governments must engage in specific fact-finding processes to compile a thorough, accurate, and specific evidentiary foundation to determine whether there is, in fact, discrimination sufficient to justify an affirmative action plan. Further, state and local governments must continue to update this information and revise their programs accordingly.

While the Supreme Court has yet to return to this exact area of law to sort out some of the conflicts, the Fourth Circuit has provided some guidance on core standards. Ultimately, MBE and WBE programs can withstand challenges if state and local governments comply with the requirements outlined by the courts.

Appendix B

B. Detailed Market Area Analyses

Geographic Product Market

TABLE B-1.
WSSC WATER GEOGRAPHIC MARKET AREA
ALL FIRMS

MGT COUNTY, STATE	PRIME ONLY & SUB ONLY PAYMENTS	PERCENT	CUMULATIVE PERCENT
PRINCE GEORGES COUNTY, MD	\$459,859,896.64	21.95%	21.95%
HOWARD COUNTY, MD	\$224,225,211.27	10.70%	32.66%
MONTGOMERY COUNTY, MD	\$198,572,376.47	9.48%	42.14%
CARROLL COUNTY, MD	\$116,113,826.52	5.54%	47.68%
BALTIMORE COUNTY, MD	\$99,900,021.90	4.77%	52.45%
ANNE ARUNDEL COUNTY, MD	\$96,111,114.98	4.59%	57.04%
FAIRFAX COUNTY, VA	\$94,977,015.86	4.53%	61.57%
DISTRICT OF COLUMBIA, DC	\$80,663,762.15	3.85%	65.42%
CITY OF BALTIMORE, MD	\$73,034,151.58	3.49%	68.91%
CITY OF FAIRFAX, VA	\$50,684,483.74	2.42%	71.33%
FREDERICK COUNTY, MD	\$43,355,752.22	2.07%	73.40%
LOUDOUN COUNTY, VA	\$41,643,349.41	1.99%	75.39%
CALVERT COUNTY, MD	\$36,823,115.43	1.76%	77.15%
PRINCE WILLIAM COUNTY, VA	\$10,905,737.71	0.52%	77.67%
FAUQUIER COUNTY, VA	\$4,907,047.03	0.23%	77.90%
CHARLES COUNTY, MD	\$3,332,053.47	0.16%	78.06%
CLARKE COUNTY, VA	\$3,254,052.12	0.16%	78.21%
CITY OF FALLS CHURCH, VA	\$3,056,078.05	0.15%	78.36%
ARLINGTON COUNTY, VA	\$1,033,887.57	0.05%	78.41%
CITY OF ALEXANDRIA, VA	\$967,540.11	0.05%	78.46%
STAFFORD COUNTY, VA	\$671,696.99	0.03%	78.49%
JEFFERSON COUNTY, WV	\$390,209.80	0.02%	78.51%
CITY OF MANASSAS, VA	\$369,270.41	0.02%	78.52%
CITY OF FREDERICKSBURG, VA	\$228,432.29	0.01%	78.54%
SPOTSYLVANIA COUNTY, VA	\$68,626.50	0.00%	78.54%
WARREN COUNTY, VA	\$61,660.24	0.00%	78.54%
CULPEPER COUNTY, VA	\$5,800.00	0.00%	78.54%
MONMOUTH COUNTY, NJ	\$53,251,946.41	2.54%	81.08%
MONTGOMERY COUNTY, OH	\$51,403,216.88	2.45%	83.54%

MGT COUNTY, STATE	PRIME ONLY & SUB ONLY PAYMENTS	PERCENT	CUMULATIVE PERCENT
DALLAS COUNTY, TX	\$48,041,863.79	2.29%	85.83%
COOK COUNTY, IL	\$25,808,602.78	1.23%	87.06%
FULTON COUNTY, GA	\$24,111,641.74	1.15%	88.21%
HARFORD COUNTY, MD	\$16,441,800.48	0.78%	89.00%
ALLEGHENY COUNTY, PA	\$11,811,078.49	0.56%	89.56%
VIRGINIA BEACH CITY COUNTY, VA	\$10,711,691.11	0.51%	90.07%
WARREN COUNTY, OH	\$10,331,277.20	0.49%	90.57%
CHITTENDEN COUNTY, VT	\$9,192,853.00	0.44%	91.01%
HANOVER COUNTY, VA	\$9,140,202.88	0.44%	91.44%
YORK COUNTY, PA	\$8,673,581.43	0.41%	91.86%
NEW CASTLE COUNTY, DE	\$8,231,881.22	0.39%	92.25%
JACKSON COUNTY, MO	\$8,096,739.57	0.39%	92.64%
CUYAHOGA COUNTY, OH	\$7,302,676.27	0.35%	92.99%
TARRANT COUNTY, TX	\$6,129,766.25	0.29%	93.28%
SUSSEX COUNTY, DE	\$5,618,834.34	0.27%	93.55%
WINDHAM COUNTY, VT	\$5,322,209.49	0.25%	93.80%
HENRICO COUNTY, VA	\$5,267,613.37	0.25%	94.05%
SANTA CRUZ COUNTY, CA	\$5,023,566.75	0.24%	94.29%
SUFFOLK COUNTY, MA	\$4,868,384.35	0.23%	94.52%
MECKLENBURG COUNTY, NC	\$4,794,097.14	0.23%	94.75%
HAMILTON COUNTY, OH	\$4,522,204.67	0.22%	94.97%
LOS ANGELES COUNTY, CA	\$4,006,810.23	0.19%	95.16%
JACKSON COUNTY, MI	\$3,776,781.60	0.18%	95.34%
CLARK COUNTY, NV	\$3,703,396.87	0.18%	95.52%
PHILADELPHIA COUNTY, PA	\$3,524,677.37	0.17%	95.69%
ONONDAGA COUNTY, NY	\$3,481,183.20	0.17%	95.85%
TRAVIS COUNTY, TX	\$3,469,321.14	0.17%	96.02%
KING GEORGE COUNTY, VA	\$3,444,213.75	0.16%	96.18%
WASHINGTON COUNTY, PA	\$3,400,775.73	0.16%	96.34%
SAINT LOUIS COUNTY, MO	\$3,348,909.20	0.16%	96.50%
ATLANTIC COUNTY, NJ	\$3,137,919.85	0.15%	96.65%
CUMBERLAND COUNTY, PA	\$2,887,368.06	0.14%	96.79%
QUEEN ANNES COUNTY, MD	\$2,819,599.76	0.13%	96.93%
SAN BERNARDINO COUNTY, CA	\$2,807,486.80	0.13%	97.06%
WASHINGTON COUNTY, MD	\$2,589,658.98	0.12%	97.18%
ESSEX COUNTY, NJ	\$2,246,001.52	0.11%	97.29%
WORCESTER COUNTY, MD	\$2,193,129.00	0.10%	97.40%
HARRIS COUNTY, TX	\$2,146,398.83	0.10%	97.50%
SAINT CHARLES COUNTY, MO	\$2,134,162.63	0.10%	97.60%

MGT COUNTY, STATE	PRIME ONLY & SUB ONLY PAYMENTS	PERCENT	CUMULATIVE PERCENT
INTERNATIONAL	\$1,813,022.65	0.09%	97.69%
ALAMEDA COUNTY, CA	\$1,646,014.61	0.08%	97.77%
KING COUNTY, WA	\$1,554,647.51	0.07%	97.84%
CHESTERFIELD COUNTY, VA	\$1,495,995.46	0.07%	97.91%
DUPAGE COUNTY, IL	\$1,456,086.79	0.07%	97.98%
YAVAPAI COUNTY, AZ	\$1,365,497.01	0.07%	98.05%
TALBOT COUNTY, MD	\$1,339,360.86	0.06%	98.11%
RICHMOND CITY COUNTY, VA	\$1,329,822.11	0.06%	98.17%
WAYNE COUNTY, MI	\$1,267,420.33	0.06%	98.23%
CAROLINE COUNTY, MD	\$1,246,595.89	0.06%	98.29%
MIDDLESEX COUNTY, CT	\$1,212,055.75	0.06%	98.35%
ORANGE COUNTY, FL	\$1,208,853.09	0.06%	98.41%
JEFFERSON COUNTY, OH	\$1,150,255.48	0.05%	98.46%
RAMSEY COUNTY, MN	\$1,100,566.57	0.05%	98.52%
HUDSON COUNTY, NJ	\$1,019,292.40	0.05%	98.56%
OCEAN COUNTY, NJ	\$975,109.77	0.05%	98.61%
MONTGOMERY COUNTY, PA	\$946,443.42	0.05%	98.66%
NEW YORK COUNTY, NY	\$883,269.79	0.04%	98.70%
KENDALL COUNTY, TX	\$879,121.00	0.04%	98.74%
CHESTER COUNTY, PA	\$863,440.12	0.04%	98.78%
MONONGALIA COUNTY, WV	\$834,037.47	0.04%	98.82%
WICOMICO COUNTY, MD	\$759,833.40	0.04%	98.86%
PORTER COUNTY, IN	\$745,200.00	0.04%	98.89%
MARICOPA COUNTY, AZ	\$740,299.11	0.04%	98.93%
BARNSTABLE COUNTY, MA	\$700,016.57	0.03%	98.96%
MIDDLESEX COUNTY, MA	\$679,184.83	0.03%	98.99%
LEBANON COUNTY, PA	\$656,719.11	0.03%	99.03%
SANTA BARBARA COUNTY, CA	\$655,203.02	0.03%	99.06%
MARION COUNTY, IN	\$617,962.37	0.03%	99.09%
MORRIS COUNTY, NJ	\$609,230.63	0.03%	99.12%
HOWARD COUNTY, IN	\$608,579.00	0.03%	99.15%
SOMERSET COUNTY, NJ	\$582,767.11	0.03%	99.17%
BUCKS COUNTY, PA	\$547,727.45	0.03%	99.20%
DELAWARE COUNTY, PA	\$546,501.44	0.03%	99.23%
RIVERSIDE COUNTY, CA	\$545,810.00	0.03%	99.25%
DORCHESTER COUNTY, MD	\$542,981.60	0.03%	99.28%
ROCKINGHAM COUNTY, NH	\$541,383.76	0.03%	99.30%
KNOX COUNTY, TN	\$517,863.33	0.02%	99.33%
MONROE COUNTY, NY	\$438,574.15	0.02%	99.35%

MGT COUNTY, STATE	PRIME ONLY & SUB ONLY PAYMENTS	PERCENT	CUMULATIVE PERCENT
SAN MATEO COUNTY, CA	\$403,260.58	0.02%	99.37%
CHATTOOGA COUNTY, GA	\$385,118.00	0.02%	99.39%
PALM BEACH COUNTY, FL	\$369,325.00	0.02%	99.40%
MIDDLESEX COUNTY, NJ	\$362,972.12	0.02%	99.42%
SAN DIEGO COUNTY, CA	\$347,816.50	0.02%	99.44%
PETERSBURG CITY COUNTY, VA	\$328,852.90	0.02%	99.45%
GWINNETT COUNTY, GA	\$305,200.20	0.01%	99.47%
ORANGE COUNTY, CA	\$303,854.86	0.01%	99.48%
DAUPHIN COUNTY, PA	\$294,132.85	0.01%	99.50%
DAVIDSON COUNTY, TN	\$279,574.24	0.01%	99.51%
HENNEPIN COUNTY, MN	\$278,734.56	0.01%	99.52%
LEON COUNTY, FL	\$273,085.00	0.01%	99.54%
MAHONING COUNTY, OH	\$254,954.37	0.01%	99.55%
CAMDEN COUNTY, NJ	\$245,730.20	0.01%	99.56%
CUMBERLAND COUNTY, NJ	\$231,900.40	0.01%	99.57%
WORCESTER COUNTY, MA	\$221,369.91	0.01%	99.58%
FRANKLIN COUNTY, NC	\$217,998.00	0.01%	99.59%
COLLIN COUNTY, TX	\$214,017.59	0.01%	99.60%
NORFOLK CITY COUNTY, VA	\$212,738.15	0.01%	99.61%
LUZERNE COUNTY, PA	\$203,813.93	0.01%	99.62%
BROWARD COUNTY, FL	\$202,692.00	0.01%	99.63%
ARAPAHOE COUNTY, CO	\$196,350.00	0.01%	99.64%
JEFFERSON COUNTY, AL	\$191,205.01	0.01%	99.65%
OKLAHOMA COUNTY, OK	\$185,706.24	0.01%	99.66%
BURLINGTON COUNTY, NJ	\$184,154.51	0.01%	99.67%
FOND DU LAC COUNTY, WI	\$182,913.00	0.01%	99.68%
GUILFORD COUNTY, NC	\$182,386.06	0.01%	99.69%
WARREN COUNTY, KY	\$178,816.00	0.01%	99.69%
JAMES CITY COUNTY, VA	\$173,200.00	0.01%	99.70%
ALBANY COUNTY, NY	\$172,942.50	0.01%	99.71%
HILLSBOROUGH COUNTY, FL	\$168,106.06	0.01%	99.72%
TUSCALOOSA COUNTY, AL	\$168,000.00	0.01%	99.73%
KENT COUNTY, MD	\$164,981.32	0.01%	99.73%
HENRY COUNTY, GA	\$158,751.00	0.01%	99.74%
UTAH COUNTY, UT	\$155,280.00	0.01%	99.75%
JOHNSON COUNTY, KS	\$154,838.39	0.01%	99.76%
WESTCHESTER COUNTY, NY	\$154,441.73	0.01%	99.76%
MCLENNAN COUNTY, TX	\$149,036.74	0.01%	99.77%
LEHIGH COUNTY, PA	\$148,927.71	0.01%	99.78%

MGT COUNTY, STATE	PRIME ONLY & SUB ONLY PAYMENTS	PERCENT	CUMULATIVE PERCENT
PLYMOUTH COUNTY, MA	\$147,025.00	0.01%	99.79%
LYCOMING COUNTY, PA	\$144,567.59	0.01%	99.79%
MERCER COUNTY, NJ	\$144,182.23	0.01%	99.80%
WAKE COUNTY, NC	\$140,687.45	0.01%	99.81%
SHELBY COUNTY, TN	\$135,795.00	0.01%	99.81%
YORK COUNTY, SC	\$132,499.28	0.01%	99.82%
PIERCE COUNTY, WA	\$130,927.32	0.01%	99.83%
MIAMI DADE COUNTY, FL	\$128,296.09	0.01%	99.83%
BUTLER COUNTY, PA	\$127,237.10	0.01%	99.84%
LANCASTER COUNTY, PA	\$125,085.64	0.01%	99.84%
FAIRFIELD COUNTY, CT	\$124,013.50	0.01%	99.85%
SANGAMON COUNTY, IL	\$123,508.78	0.01%	99.86%
HANCOCK COUNTY, IN	\$119,575.00	0.01%	99.86%
WASHTENAW COUNTY, MI	\$119,551.06	0.01%	99.87%
SAINT CROIX COUNTY, WI	\$118,117.99	0.01%	99.87%
FORT BEND COUNTY, TX	\$108,370.27	0.01%	99.88%
BEXAR COUNTY, TX	\$104,885.88	0.01%	99.88%
FRANKLIN COUNTY, PA	\$100,678.00	0.00%	99.89%
BAY COUNTY, FL	\$98,454.22	0.00%	99.89%
MILWAUKEE COUNTY, WI	\$97,272.50	0.00%	99.90%
MARION COUNTY, FL	\$92,517.42	0.00%	99.90%
PUTNAM COUNTY, FL	\$86,075.00	0.00%	99.91%
BERNALILLO COUNTY, NM	\$83,998.60	0.00%	99.91%
NEW HANOVER COUNTY, NC	\$83,880.00	0.00%	99.91%
RACINE COUNTY, WI	\$80,097.00	0.00%	99.92%
SNYDER COUNTY, PA	\$79,406.00	0.00%	99.92%
ST JOSEPH COUNTY, IN	\$77,250.00	0.00%	99.92%
JEFFERSON COUNTY, CO	\$73,725.00	0.00%	99.93%
PASSAIC COUNTY, NJ	\$73,598.00	0.00%	99.93%
CAMBRIA COUNTY, PA	\$68,800.00	0.00%	99.93%
BRISTOL COUNTY, MA	\$62,396.20	0.00%	99.94%
SEMINOLE COUNTY, FL	\$60,280.00	0.00%	99.94%
GREENE COUNTY, MO	\$57,676.00	0.00%	99.94%
FRANKLIN COUNTY, OH	\$50,007.00	0.00%	99.95%
WELD COUNTY, CO	\$48,400.00	0.00%	99.95%
LAKE COUNTY, IL	\$48,238.07	0.00%	99.95%
MONROE COUNTY, PA	\$48,000.00	0.00%	99.95%
MADISON COUNTY, KY	\$47,636.00	0.00%	99.95%
WAUKESHA COUNTY, WI	\$47,407.00	0.00%	99.96%

MGT COUNTY, STATE	PRIME ONLY & SUB ONLY PAYMENTS	PERCENT	CUMULATIVE PERCENT
SAN FRANCISCO COUNTY, CA	\$46,542.02	0.00%	99.96%
GRAFTON COUNTY, NH	\$42,700.00	0.00%	99.96%
MANATEE COUNTY, FL	\$42,150.00	0.00%	99.96%
BROWN COUNTY, WI	\$42,000.00	0.00%	99.97%
MONTEREY COUNTY, CA	\$36,975.00	0.00%	99.97%
SANTA CLARA COUNTY, CA	\$35,900.00	0.00%	99.97%
DEKALB COUNTY, GA	\$34,674.31	0.00%	99.97%
SACRAMENTO COUNTY, CA	\$33,365.73	0.00%	99.97%
ADAMS COUNTY, CO	\$31,625.00	0.00%	99.97%
CUMBERLAND COUNTY, ME	\$31,200.00	0.00%	99.98%
POLK COUNTY, FL	\$31,188.00	0.00%	99.98%
SALT LAKE COUNTY, UT	\$29,284.90	0.00%	99.98%
SUFFOLK COUNTY, NY	\$25,907.22	0.00%	99.98%
WOOD COUNTY, OH	\$25,286.43	0.00%	99.98%
CLAY COUNTY, FL	\$24,000.00	0.00%	99.98%
COLUMBIA COUNTY, PA	\$23,780.00	0.00%	99.98%
COBB COUNTY, GA	\$23,745.60	0.00%	99.98%
FORSYTH COUNTY, NC	\$22,676.02	0.00%	99.98%
CECIL COUNTY, MD	\$19,979.00	0.00%	99.99%
ROCKLAND COUNTY, NY	\$18,527.00	0.00%	99.99%
RENVILLE COUNTY, MN	\$17,015.90	0.00%	99.99%
WILLIAMSON COUNTY, TX	\$16,493.40	0.00%	99.99%
LINCOLN COUNTY, ME	\$16,282.43	0.00%	99.99%
AUGUSTA COUNTY, VA	\$15,669.00	0.00%	99.99%
LAPEER COUNTY, MI	\$14,581.00	0.00%	99.99%
GLOUCESTER COUNTY, NJ	\$14,500.00	0.00%	99.99%
NEWPORT NEWS CITY COUNTY, VA	\$13,500.00	0.00%	99.99%
KANE COUNTY, IL	\$13,219.48	0.00%	99.99%
BERGEN COUNTY, NJ	\$11,867.00	0.00%	99.99%
PARK COUNTY, WY	\$11,374.00	0.00%	99.99%
LORAIN COUNTY, OH	\$10,449.55	0.00%	99.99%
POLK COUNTY, IA	\$10,195.00	0.00%	99.99%
HILLSBOROUGH COUNTY, NH	\$10,000.00	0.00%	100.00%
ADA COUNTY, ID	\$9,418.75	0.00%	100.00%
BRONX COUNTY, NY	\$9,060.00	0.00%	100.00%
PICKENS COUNTY, GA	\$8,770.00	0.00%	100.00%
WINNEBAGO COUNTY, WI	\$8,010.00	0.00%	100.00%
ERIE COUNTY, NY	\$7,980.00	0.00%	100.00%
BUNCOMBE COUNTY, NC	\$7,469.23	0.00%	100.00%

MGT COUNTY, STATE	PRIME ONLY & SUB ONLY PAYMENTS	PERCENT	CUMULATIVE PERCENT
CHAMPAIGN COUNTY, IL	\$7,006.01	0.00%	100.00%
SUFFOLK CITY COUNTY, VA	\$6,333.83	0.00%	100.00%
JOHNSON COUNTY, TX	\$6,052.10	0.00%	100.00%
HURON COUNTY, MI	\$6,000.00	0.00%	100.00%
HORRY COUNTY, SC	\$5,967.50	0.00%	100.00%
RICHMOND COUNTY, NY	\$4,296.00	0.00%	100.00%
NORFOLK COUNTY, MA	\$3,664.86	0.00%	100.00%
SAINT LAWRENCE COUNTY, NY	\$2,940.60	0.00%	100.00%
DAKOTA COUNTY, MN	\$2,916.00	0.00%	100.00%
ORANGE COUNTY, NC	\$2,836.45	0.00%	100.00%
LA SALLE COUNTY, IL	\$2,000.00	0.00%	100.00%
NASH COUNTY, NC	\$1,006.00	0.00%	100.00%
TOTAL	\$2,094,700,114.69		

TABLE B-2.
WSSC WATER GEOGRAPHIC MARKET AREA
CONSTRUCTION FIRMS

MGT COUNTY, STATE	PRIME ONLY & SUB ONLY PAYMENTS	PERCENT	CUMULATIVE PERCENT
PRINCE GEORGES COUNTY, MD	\$303,884,241.43	25.95%	25.95%
MONTGOMERY COUNTY, MD	\$133,862,306.61	11.43%	37.39%
CARROLL COUNTY, MD	\$113,847,882.52	9.72%	47.11%
HOWARD COUNTY, MD	\$78,812,032.10	6.73%	53.84%
FAIRFAX COUNTY, VA	\$65,078,961.50	5.56%	59.40%
ANNE ARUNDEL COUNTY, MD	\$41,296,689.96	3.53%	62.93%
CITY OF FAIRFAX, VA	\$40,052,905.11	3.42%	66.35%
CALVERT COUNTY, MD	\$36,823,115.43	3.14%	69.49%
DISTRICT OF COLUMBIA, DC	\$35,104,481.32	3.00%	82.87%
LOUDOUN COUNTY, VA	\$34,099,882.38	2.91%	75.40%
FREDERICK COUNTY, MD	\$33,101,862.32	2.83%	78.23%
BALTIMORE COUNTY, MD	\$23,509,666.34	2.01%	80.24%
CITY OF BALTIMORE, MD	\$20,172,845.27	1.72%	81.96%
CHARLES COUNTY, MD	\$3,306,301.83	0.28%	82.24%
CLARKE COUNTY, VA	\$3,254,052.12	0.28%	82.52%
PRINCE WILLIAM COUNTY, VA	\$3,206,374.82	0.27%	82.79%
CITY OF MANASSAS, VA	\$369,270.41	0.03%	82.83%
JEFFERSON COUNTY, WV	\$304,149.80	0.03%	82.85%

MGT COUNTY, STATE	PRIME ONLY & SUB ONLY PAYMENTS	PERCENT	CUMULATIVE PERCENT
STAFFORD COUNTY, VA	\$251,170.21	0.02%	82.87%
SPOTSYLVANIA COUNTY, VA	\$68,626.50	0.01%	82.88%
FAUQUIER COUNTY, VA	\$53,113.00	0.00%	82.88%
ARLINGTON COUNTY, VA	\$27,700.00	0.00%	82.89%
CITY OF ALEXANDRIA, VA	\$6,521.00	0.00%	82.89%
CULPEPER COUNTY, VA	\$5,800.00	0.00%	82.89%
MONMOUTH COUNTY, NJ	\$53,251,946.41	4.55%	87.44%
MONTGOMERY COUNTY, OH	\$51,403,216.88	4.39%	91.83%
HARFORD COUNTY, MD	\$13,671,462.53	1.17%	92.99%
WARREN COUNTY, OH	\$10,331,277.20	0.88%	93.88%
CHITTENDEN COUNTY, VT	\$9,192,853.00	0.79%	94.66%
YORK COUNTY, PA	\$7,736,050.90	0.66%	95.32%
NEW CASTLE COUNTY, DE	\$7,281,617.56	0.62%	95.94%
CUYAHOGA COUNTY, OH	\$6,782,174.97	0.58%	96.52%
TARRANT COUNTY, TX	\$5,511,229.16	0.47%	96.99%
SUSSEX COUNTY, DE	\$5,114,517.71	0.44%	97.43%
TRAVIS COUNTY, TX	\$3,432,029.00	0.29%	97.72%
WASHINGTON COUNTY, PA	\$3,400,775.73	0.29%	98.01%
SAINT LOUIS COUNTY, MO	\$3,348,909.20	0.29%	98.30%
MECKLENBURG COUNTY, NC	\$3,070,101.43	0.26%	98.56%
WORCESTER COUNTY, MD	\$2,193,129.00	0.19%	98.75%
SAINT CHARLES COUNTY, MO	\$2,134,162.63	0.18%	98.93%
ESSEX COUNTY, NJ	\$1,577,704.58	0.13%	99.07%
CUMBERLAND COUNTY, PA	\$1,301,230.17	0.11%	99.18%
CAROLINE COUNTY, MD	\$1,246,595.89	0.11%	99.28%
HARRIS COUNTY, TX	\$1,220,553.09	0.10%	99.39%
RAMSEY COUNTY, MN	\$1,100,566.57	0.09%	99.48%
PHILADELPHIA COUNTY, PA	\$611,826.23	0.05%	99.53%
HOWARD COUNTY, IN	\$608,579.00	0.05%	99.59%
CHESTER COUNTY, PA	\$330,288.00	0.03%	99.61%
PETERSBURG CITY COUNTY, VA	\$328,852.90	0.03%	99.64%
CUMBERLAND COUNTY, NJ	\$231,900.40	0.02%	99.66%
LOS ANGELES COUNTY, CA	\$231,674.00	0.02%	99.68%
TALBOT COUNTY, MD	\$194,916.60	0.02%	99.70%
DAUPHIN COUNTY, PA	\$186,133.15	0.02%	99.71%
FOND DU LAC COUNTY, WI	\$182,913.00	0.02%	99.73%
LUZERNE COUNTY, PA	\$178,413.93	0.02%	99.75%
JAMES CITY COUNTY, VA	\$173,200.00	0.01%	99.76%
KENT COUNTY, MD	\$164,981.32	0.01%	99.77%

MGT COUNTY, STATE	PRIME ONLY & SUB ONLY PAYMENTS	PERCENT	CUMULATIVE PERCENT
PLYMOUTH COUNTY, MA	\$147,025.00	0.01%	99.79%
LYCOMING COUNTY, PA	\$144,567.59	0.01%	99.80%
MAHONING COUNTY, OH	\$143,598.00	0.01%	99.81%
CHESTERFIELD COUNTY, VA	\$141,324.20	0.01%	99.82%
COOK COUNTY, IL	\$135,817.00	0.01%	99.83%
SHELBY COUNTY, TN	\$135,795.00	0.01%	99.85%
PIERCE COUNTY, WA	\$130,927.32	0.01%	99.86%
BUTLER COUNTY, PA	\$127,237.10	0.01%	99.87%
DALLAS COUNTY, TX	\$123,500.09	0.01%	99.88%
HANCOCK COUNTY, IN	\$119,575.00	0.01%	99.89%
BURLINGTON COUNTY, NJ	\$107,414.52	0.01%	99.90%
DORCHESTER COUNTY, MD	\$92,724.38	0.01%	99.91%
MIDDLESEX COUNTY, MA	\$89,000.00	0.01%	99.91%
ST JOSEPH COUNTY, IN	\$77,250.00	0.01%	99.92%
WASHINGTON COUNTY, MD	\$73,164.85	0.01%	99.93%
CAMBRIA COUNTY, PA	\$68,800.00	0.01%	99.93%
CAMDEN COUNTY, NJ	\$68,325.00	0.01%	99.94%
ALLEGHENY COUNTY, PA	\$67,600.00	0.01%	99.94%
LANCASTER COUNTY, PA	\$61,002.52	0.01%	99.95%
MERCER COUNTY, NJ	\$53,851.60	0.00%	99.95%
FULTON COUNTY, GA	\$53,589.00	0.00%	99.96%
SOMERSET COUNTY, NJ	\$51,189.23	0.00%	99.96%
MONROE COUNTY, PA	\$48,000.00	0.00%	99.97%
BROWN COUNTY, WI	\$42,000.00	0.00%	99.97%
FAIRFIELD COUNTY, CT	\$34,145.00	0.00%	99.97%
ADAMS COUNTY, CO	\$31,625.00	0.00%	99.98%
WICOMICO COUNTY, MD	\$31,469.52	0.00%	99.98%
WAKE COUNTY, NC	\$27,109.00	0.00%	99.98%
WOOD COUNTY, OH	\$25,286.43	0.00%	99.98%
JEFFERSON COUNTY, OH	\$25,000.00	0.00%	99.99%
BUCKS COUNTY, PA	\$24,448.00	0.00%	99.99%
DUPAGE COUNTY, IL	\$19,293.00	0.00%	99.99%
MIDDLESEX COUNTY, NJ	\$17,676.00	0.00%	99.99%
LAPEER COUNTY, MI	\$14,581.00	0.00%	99.99%
ATLANTIC COUNTY, NJ	\$13,386.75	0.00%	99.99%
FRANKLIN COUNTY, PA	\$12,600.00	0.00%	99.99%
PARK COUNTY, WY	\$11,374.00	0.00%	100.00%
LORAIN COUNTY, OH	\$10,449.55	0.00%	100.00%
HAMILTON COUNTY, OH	\$10,357.13	0.00%	100.00%
DELAWARE COUNTY, PA	\$7,095.72	0.00%	100.00%

MGT COUNTY, STATE	PRIME ONLY & SUB ONLY PAYMENTS	PERCENT	CUMULATIVE PERCENT
ERIE COUNTY, NY	\$7,005.00	0.00%	100.00%
HURON COUNTY, MI	\$6,000.00	0.00%	100.00%
HANOVER COUNTY, VA	\$5,284.00	0.00%	100.00%
ORANGE COUNTY, FL	\$3,172.00	0.00%	100.00%
BERGEN COUNTY, NJ	\$1,480.00	0.00%	100.00%
HILLSBOROUGH COUNTY, FL	\$1,250.00	0.00%	100.00%
NASH COUNTY, NC	\$1,006.00	0.00%	100.00%
TOTAL	\$ 1,170,870,104.62		

TABLE B-3.
WSSC WATER GEOGRAPHIC MARKET AREA
ARCHITECTURE & ENGINEERING FIRMS

MGT COUNTY, STATE	PRIME ONLY & SUB ONLY PAYMENTS	PERCENT	CUMULATIVE PERCENT
HOWARD COUNTY, MD	\$58,463,158.84	23.59%	23.59%
PRINCE GEORGES COUNTY, MD	\$52,581,441.60	21.22%	44.81%
BALTIMORE COUNTY, MD	\$33,989,146.89	13.72%	58.53%
MONTGOMERY COUNTY, MD	\$31,421,076.82	12.68%	71.21%
CITY OF BALTIMORE, MD	\$25,389,790.61	10.25%	81.46%
ANNE ARUNDEL COUNTY, MD	\$15,338,010.66	6.19%	87.65%
DISTRICT OF COLUMBIA, DC	\$7,831,316.72	3.16%	90.81%
CITY OF FAIRFAX, VA	\$7,240,678.44	2.92%	93.73%
LOUDOUN COUNTY, VA	\$2,909,378.09	1.17%	94.90%
ARLINGTON COUNTY, VA	\$767,553.97	0.31%	95.21%
FAIRFAX COUNTY, VA	\$727,215.48	0.29%	95.51%
STAFFORD COUNTY, VA	\$420,526.78	0.17%	95.68%
CITY OF FREDERICKSBURG, VA	\$228,432.29	0.09%	95.77%
WARREN COUNTY, VA	\$60,035.24	0.02%	95.79%
ATLANTIC COUNTY, NJ	\$2,727,388.08	1.10%	96.89%
COOK COUNTY, IL	\$2,170,438.65	0.88%	97.77%
HARFORD COUNTY, MD	\$1,340,943.85	0.54%	98.31%
PORTER COUNTY, IN	\$745,200.00	0.30%	98.61%
MIDDLESEX COUNTY, MA	\$498,670.26	0.20%	98.81%
ALLEGHENY COUNTY, PA	\$487,801.76	0.20%	99.01%
CHATTOOGA COUNTY, GA	\$385,118.00	0.16%	99.16%
VIRGINIA BEACH CITY COUNTY, VA	\$379,322.08	0.15%	99.32%
RICHMOND CITY COUNTY, VA	\$300,139.27	0.12%	99.44%
CAMDEN COUNTY, NJ	\$175,950.00	0.07%	99.51%
INTERNATIONAL	\$135,057.80	0.05%	99.56%
MIAMI DADE COUNTY, FL	\$128,296.09	0.05%	99.62%
HARRIS COUNTY, TX	\$125,373.66	0.05%	99.67%
HENNEPIN COUNTY, MN	\$114,835.36	0.05%	99.71%
NEW YORK COUNTY, NY	\$112,808.90	0.05%	99.76%
DAUPHIN COUNTY, PA	\$107,999.70	0.04%	99.80%
LOS ANGELES COUNTY, CA	\$105,423.49	0.04%	99.84%
CHESTER COUNTY, PA	\$66,769.17	0.03%	99.87%
WORCESTER COUNTY, MA	\$55,000.59	0.02%	99.89%
GRAFTON COUNTY, NH	\$42,700.00	0.02%	99.91%
WAKE COUNTY, NC	\$41,340.00	0.02%	99.93%
SACRAMENTO COUNTY, CA	\$33,365.73	0.01%	99.94%
SANTA CLARA COUNTY, CA	\$33,000.00	0.01%	99.95%

MGT COUNTY, STATE	PRIME ONLY & SUB ONLY PAYMENTS	PERCENT	CUMULATIVE PERCENT
NEW CASTLE COUNTY, DE	\$24,768.06	0.01%	99.96%
FORSYTH COUNTY, NC	\$22,676.02	0.01%	99.97%
YORK COUNTY, PA	\$20,460.96	0.01%	99.98%
PHILADELPHIA COUNTY, PA	\$16,268.87	0.01%	99.99%
WASHTENAW COUNTY, MI	\$14,400.00	0.01%	99.99%
CHAMPAIGN COUNTY, IL	\$7,006.01	0.00%	100.00%
RICHMOND COUNTY, NY	\$4,296.00	0.00%	100.00%
SAINT LAWRENCE COUNTY, NY	\$2,940.60	0.00%	100.00%
LA SALLE COUNTY, IL	\$2,000.00	0.00%	100.00%
TOTAL	\$247,795,521.39		

TABLE B-4.
WSSC WATER GEOGRAPHIC MARKET AREA
PROFESSIONAL SERVICES FIRMS

MGT COUNTY, STATE	PRIME ONLY & SUB ONLY PAYMENTS	PERCENT	CUMULATIVE PERCENT
PRINCE GEORGES COUNTY, MD	\$17,407,456.71	8.13%	8.13%
ANNE ARUNDEL COUNTY, MD	\$15,187,586.14	7.10%	15.23%
CITY OF BALTIMORE, MD	\$13,551,053.65	6.33%	21.56%
MONTGOMERY COUNTY, MD	\$13,145,718.09	6.14%	27.70%
FAIRFAX COUNTY, VA	\$12,458,247.40	5.82%	33.52%
HOWARD COUNTY, MD	\$8,961,252.76	4.19%	37.71%
DISTRICT OF COLUMBIA, DC	\$8,890,249.00	4.15%	41.87%
BALTIMORE COUNTY, MD	\$2,312,967.49	1.08%	42.95%
LOUDOUN COUNTY, VA	\$2,228,060.44	1.04%	43.99%
CITY OF FALLS CHURCH, VA	\$2,059,948.84	0.96%	44.95%
CITY OF FAIRFAX, VA	\$1,870,029.05	0.87%	45.82%
CITY OF ALEXANDRIA, VA	\$871,961.27	0.41%	46.23%
ARLINGTON COUNTY, VA	\$230,466.10	0.11%	46.34%
CARROLL COUNTY, MD	\$202,826.25	0.09%	46.43%
FREDERICK COUNTY, MD	\$148,746.46	0.07%	46.50%
JEFFERSON COUNTY, WV	\$86,060.00	0.04%	46.54%
DALLAS COUNTY, TX	\$41,134,277.93	19.22%	65.76%
FULTON COUNTY, GA	\$12,024,653.20	5.62%	71.38%
JACKSON COUNTY, MO	\$8,096,739.57	3.78%	75.16%
VIRGINIA BEACH CITY COUNTY, VA	\$7,903,208.53	3.69%	78.86%
COOK COUNTY, IL	\$6,377,185.27	2.98%	81.84%
ALLEGHENY COUNTY, PA	\$6,142,166.76	2.87%	84.71%

MGT COUNTY, STATE	PRIME ONLY & SUB ONLY PAYMENTS	PERCENT	CUMULATIVE PERCENT
CLARK COUNTY, NV	\$3,610,416.87	1.69%	86.39%
PHILADELPHIA COUNTY, PA	\$2,609,644.83	1.22%	87.61%
JACKSON COUNTY, MI	\$2,500,979.79	1.17%	88.78%
LOS ANGELES COUNTY, CA	\$1,702,629.53	0.80%	89.58%
INTERNATIONAL	\$1,542,486.85	0.72%	90.30%
CHESTERFIELD COUNTY, VA	\$1,354,671.26	0.63%	90.93%
DUPAGE COUNTY, IL	\$1,133,915.23	0.53%	91.46%
JEFFERSON COUNTY, OH	\$1,125,255.48	0.53%	91.99%
OCEAN COUNTY, NJ	\$975,109.77	0.46%	92.44%
KENDALL COUNTY, TX	\$879,121.00	0.41%	92.85%
HARFORD COUNTY, MD	\$849,719.60	0.40%	93.25%
RICHMOND CITY COUNTY, VA	\$783,169.44	0.37%	93.62%
NEW CASTLE COUNTY, DE	\$771,877.50	0.36%	93.98%
MECKLENBURG COUNTY, NC	\$750,854.81	0.35%	94.33%
ALAMEDA COUNTY, CA	\$749,454.52	0.35%	94.68%
MARICOPA COUNTY, AZ	\$688,832.27	0.32%	95.00%
CUMBERLAND COUNTY, PA	\$669,285.91	0.31%	95.31%
NEW YORK COUNTY, NY	\$635,370.33	0.30%	95.61%
CUYAHOGA COUNTY, OH	\$496,904.34	0.23%	95.84%
MONROE COUNTY, NY	\$438,574.15	0.20%	96.05%
SAN MATEO COUNTY, CA	\$403,260.58	0.19%	96.23%
MARION COUNTY, IN	\$386,671.55	0.18%	96.42%
PALM BEACH COUNTY, FL	\$369,325.00	0.17%	96.59%
CHESTER COUNTY, PA	\$364,061.20	0.17%	96.76%
KING COUNTY, WA	\$359,174.25	0.17%	96.93%
TARRANT COUNTY, TX	\$329,789.17	0.15%	97.08%
SAN DIEGO COUNTY, CA	\$302,816.50	0.14%	97.22%
YORK COUNTY, PA	\$300,200.00	0.14%	97.36%
HARRIS COUNTY, TX	\$283,796.52	0.13%	97.49%
LEON COUNTY, FL	\$273,085.00	0.13%	97.62%
BUCKS COUNTY, PA	\$240,303.00	0.11%	97.73%
MIDDLESEX COUNTY, NJ	\$217,151.55	0.10%	97.84%
COLLIN COUNTY, TX	\$214,017.59	0.10%	97.94%
BROWARD COUNTY, FL	\$202,692.00	0.09%	98.03%
ARAPAHOE COUNTY, CO	\$196,350.00	0.09%	98.12%
RIVERSIDE COUNTY, CA	\$193,750.00	0.09%	98.21%
ALBANY COUNTY, NY	\$172,942.50	0.08%	98.29%
TUSCALOOSA COUNTY, AL	\$168,000.00	0.08%	98.37%
HILLSBOROUGH COUNTY, FL	\$166,856.06	0.08%	98.45%
WORCESTER COUNTY, MA	\$166,369.32	0.08%	98.53%

MGT COUNTY, STATE	PRIME ONLY & SUB ONLY PAYMENTS	PERCENT	CUMULATIVE PERCENT
HENRY COUNTY, GA	\$158,751.00	0.07%	98.60%
UTAH COUNTY, UT	\$155,280.00	0.07%	98.67%
WESTCHESTER COUNTY, NY	\$154,441.73	0.07%	98.75%
MCLENNAN COUNTY, TX	\$149,036.74	0.07%	98.82%
QUEEN ANNES COUNTY, MD	\$138,100.42	0.06%	98.88%
SANGAMON COUNTY, IL	\$123,508.78	0.06%	98.94%
FORT BEND COUNTY, TX	\$108,370.27	0.05%	98.99%
WASHTENAW COUNTY, MI	\$105,151.06	0.05%	99.04%
NORFOLK CITY COUNTY, VA	\$97,834.00	0.05%	99.08%
MILWAUKEE COUNTY, WI	\$97,272.50	0.05%	99.13%
MIDDLESEX COUNTY, MA	\$91,514.57	0.04%	99.17%
FAIRFIELD COUNTY, CT	\$89,868.50	0.04%	99.21%
PUTNAM COUNTY, FL	\$86,075.00	0.04%	99.25%
BERNALILLO COUNTY, NM	\$83,998.60	0.04%	99.29%
NEW HANOVER COUNTY, NC	\$83,880.00	0.04%	99.33%
RACINE COUNTY, WI	\$80,097.00	0.04%	99.37%
FRANKLIN COUNTY, PA	\$79,333.00	0.04%	99.41%
BURLINGTON COUNTY, NJ	\$76,739.99	0.04%	99.44%
JEFFERSON COUNTY, CO	\$73,725.00	0.03%	99.48%
PASSAIC COUNTY, NJ	\$71,150.00	0.03%	99.51%
SOMERSET COUNTY, NJ	\$69,600.00	0.03%	99.54%
JOHNSON COUNTY, KS	\$64,397.00	0.03%	99.57%
LANCASTER COUNTY, PA	\$64,083.12	0.03%	99.60%
MARION COUNTY, FL	\$57,200.34	0.03%	99.63%
LEHIGH COUNTY, PA	\$52,105.10	0.02%	99.65%
FRANKLIN COUNTY, OH	\$50,007.00	0.02%	99.68%
WELD COUNTY, CO	\$48,400.00	0.02%	99.70%
SAN FRANCISCO COUNTY, CA	\$46,542.02	0.02%	99.72%
GWINNETT COUNTY, GA	\$46,188.00	0.02%	99.74%
WAKE COUNTY, NC	\$43,420.45	0.02%	99.76%
MANATEE COUNTY, FL	\$42,150.00	0.02%	99.78%
TRAVIS COUNTY, TX	\$37,292.14	0.02%	99.80%
MONTEREY COUNTY, CA	\$36,975.00	0.02%	99.82%
DEKALB COUNTY, GA	\$34,674.31	0.02%	99.83%
BRISTOL COUNTY, MA	\$29,923.00	0.01%	99.85%
CLAY COUNTY, FL	\$24,000.00	0.01%	99.86%
COLUMBIA COUNTY, PA	\$23,780.00	0.01%	99.87%
HAMILTON COUNTY, OH	\$23,688.00	0.01%	99.88%
SUFFOLK COUNTY, MA	\$21,849.00	0.01%	99.89%
MORRIS COUNTY, NJ	\$20,895.25	0.01%	99.90%

MGT COUNTY, STATE	PRIME ONLY & SUB ONLY PAYMENTS	PERCENT	CUMULATIVE PERCENT
ROCKLAND COUNTY, NY	\$18,527.00	0.01%	99.91%
ORANGE COUNTY, FL	\$17,197.59	0.01%	99.92%
LAKE COUNTY, IL	\$16,898.47	0.01%	99.93%
LINCOLN COUNTY, ME	\$16,282.43	0.01%	99.93%
AUGUSTA COUNTY, VA	\$15,669.00	0.01%	99.94%
CECIL COUNTY, MD	\$14,350.00	0.01%	99.95%
NEWPORT NEWS CITY COUNTY, VA	\$13,500.00	0.01%	99.95%
WAYNE COUNTY, MI	\$10,504.40	0.00%	99.96%
BERGEN COUNTY, NJ	\$10,387.00	0.00%	99.96%
POLK COUNTY, IA	\$10,195.00	0.00%	99.97%
HILLSBOROUGH COUNTY, NH	\$10,000.00	0.00%	99.97%
SUSSEX COUNTY, DE	\$9,901.25	0.00%	99.98%
HENRICO COUNTY, VA	\$8,480.00	0.00%	99.98%
BEXAR COUNTY, TX	\$8,356.00	0.00%	99.99%
BUNCOMBE COUNTY, NC	\$7,469.23	0.00%	99.99%
POLK COUNTY, FL	\$6,555.00	0.00%	99.99%
NORFOLK COUNTY, MA	\$3,664.86	0.00%	99.99%
DAKOTA COUNTY, MN	\$2,916.00	0.00%	100.00%
GREENE COUNTY, MO	\$2,890.00	0.00%	100.00%
JEFFERSON COUNTY, AL	\$1,708.07	0.00%	100.00%
TALBOT COUNTY, MD	\$1,500.00	0.00%	100.00%
CAMDEN COUNTY, NJ	\$1,455.20	0.00%	100.00%
ERIE COUNTY, NY	\$975.00	0.00%	100.00%
TOTAL	\$214,020,425.57		

TABLE B-5.
WSSC WATER GEOGRAPHIC MARKET AREA
GOODS & SERVICES FIRMS

MGT COUNTY, STATE	PRIME ONLY & SUB ONLY PAYMENTS	PERCENT	CUMULATIVE PERCENT
PRINCE GEORGES COUNTY, MD	\$85,986,756.90	18.61%	18.61%
HOWARD COUNTY, MD	\$77,988,767.57	16.88%	35.49%
BALTIMORE COUNTY, MD	\$40,088,241.18	8.68%	44.17%
DISTRICT OF COLUMBIA, DC	\$28,837,715.11	6.24%	50.41%
ANNE ARUNDEL COUNTY, MD	\$24,288,828.22	5.26%	55.67%
MONTGOMERY COUNTY, MD	\$20,143,274.95	4.36%	60.03%
FAIRFAX COUNTY, VA	\$16,712,591.48	3.62%	63.64%
CITY OF BALTIMORE, MD	\$13,920,462.05	3.01%	66.66%

MGT COUNTY, STATE	PRIME ONLY & SUB ONLY PAYMENTS	PERCENT	CUMULATIVE PERCENT
FREDERICK COUNTY, MD	\$10,105,143.44	2.19%	68.84%
PRINCE WILLIAM COUNTY, VA	\$7,699,362.89	1.67%	70.51%
FAUQUIER COUNTY, VA	\$4,853,934.03	1.05%	71.56%
LOUDOUN COUNTY, VA	\$2,406,028.50	0.52%	72.08%
CARROLL COUNTY, MD	\$2,063,117.75	0.45%	72.53%
CITY OF FAIRFAX, VA	\$1,520,871.14	0.33%	72.86%
CITY OF FALLS CHURCH, VA	\$996,129.21	0.22%	73.07%
CITY OF ALEXANDRIA, VA	\$89,057.84	0.02%	73.09%
CHARLES COUNTY, MD	\$25,751.64	0.01%	73.10%
ARLINGTON COUNTY, VA	\$8,167.50	0.00%	73.10%
WARREN COUNTY, VA	\$1,625.00	0.00%	73.10%
COOK COUNTY, IL	\$17,125,161.86	3.71%	76.81%
FULTON COUNTY, GA	\$12,033,399.54	2.60%	79.41%
HANOVER COUNTY, VA	\$9,134,918.88	1.98%	81.39%
DALLAS COUNTY, TX	\$6,784,085.77	1.47%	82.86%
WINDHAM COUNTY, VT	\$5,322,209.49	1.15%	84.01%
HENRICO COUNTY, VA	\$5,259,133.37	1.14%	85.15%
ALLEGHENY COUNTY, PA	\$5,113,509.97	1.11%	86.25%
SANTA CRUZ COUNTY, CA	\$5,023,566.75	1.09%	87.34%
SUFFOLK COUNTY, MA	\$4,846,535.35	1.05%	88.39%
HAMILTON COUNTY, OH	\$4,488,159.54	0.97%	89.36%
ONONDAGA COUNTY, NY	\$3,481,183.20	0.75%	90.12%
KING GEORGE COUNTY, VA	\$3,444,213.75	0.75%	90.86%
SAN BERNARDINO COUNTY, CA	\$2,807,486.80	0.61%	91.47%
QUEEN ANNES COUNTY, MD	\$2,681,499.34	0.58%	92.05%
WASHINGTON COUNTY, MD	\$2,516,494.13	0.54%	92.59%
VIRGINIA BEACH CITY COUNTY, VA	\$2,429,160.50	0.53%	93.12%
LOS ANGELES COUNTY, CA	\$1,967,083.21	0.43%	93.55%
YAVAPAI COUNTY, AZ	\$1,365,497.01	0.30%	93.84%
JACKSON COUNTY, MI	\$1,275,801.81	0.28%	94.12%
WAYNE COUNTY, MI	\$1,256,915.93	0.27%	94.39%
MIDDLESEX COUNTY, CT	\$1,212,055.75	0.26%	94.65%
KING COUNTY, WA	\$1,195,473.26	0.26%	94.91%
ORANGE COUNTY, FL	\$1,188,483.50	0.26%	95.17%
TALBOT COUNTY, MD	\$1,142,944.26	0.25%	95.42%
HUDSON COUNTY, NJ	\$1,019,292.40	0.22%	95.64%
MECKLENBURG COUNTY, NC	\$973,140.90	0.21%	95.85%
MONTGOMERY COUNTY, PA	\$946,443.42	0.20%	96.05%
CUMBERLAND COUNTY, PA	\$916,851.98	0.20%	96.25%

MGT COUNTY, STATE	PRIME ONLY & SUB ONLY PAYMENTS	PERCENT	CUMULATIVE PERCENT
ALAMEDA COUNTY, CA	\$896,560.09	0.19%	96.44%
MONONGALIA COUNTY, WV	\$834,037.47	0.18%	96.62%
WICOMICO COUNTY, MD	\$728,363.88	0.16%	96.78%
BARNSTABLE COUNTY, MA	\$700,016.57	0.15%	96.93%
ESSEX COUNTY, NJ	\$668,296.94	0.14%	97.08%
LEBANON COUNTY, PA	\$656,719.11	0.14%	97.22%
SANTA BARBARA COUNTY, CA	\$655,203.02	0.14%	97.36%
YORK COUNTY, PA	\$616,869.57	0.13%	97.50%
MORRIS COUNTY, NJ	\$588,335.38	0.13%	97.62%
HARFORD COUNTY, MD	\$579,674.50	0.13%	97.75%
ROCKINGHAM COUNTY, NH	\$541,383.76	0.12%	97.87%
DELAWARE COUNTY, PA	\$539,405.72	0.12%	97.98%
KNOX COUNTY, TN	\$517,863.33	0.11%	98.09%
HARRIS COUNTY, TX	\$516,675.56	0.11%	98.21%
SUSSEX COUNTY, DE	\$494,415.38	0.11%	98.31%
SOMERSET COUNTY, NJ	\$461,977.88	0.10%	98.41%
DORCHESTER COUNTY, MD	\$450,257.22	0.10%	98.51%
ATLANTIC COUNTY, NJ	\$397,145.02	0.09%	98.60%
RIVERSIDE COUNTY, CA	\$352,060.00	0.08%	98.67%
ORANGE COUNTY, CA	\$303,854.86	0.07%	98.74%
DUPAGE COUNTY, IL	\$302,878.56	0.07%	98.80%
TARRANT COUNTY, TX	\$288,747.92	0.06%	98.87%
PHILADELPHIA COUNTY, PA	\$286,937.44	0.06%	98.93%
BUCKS COUNTY, PA	\$282,976.45	0.06%	98.99%
DAVIDSON COUNTY, TN	\$279,574.24	0.06%	99.05%
GWINNETT COUNTY, GA	\$259,012.20	0.06%	99.11%
RICHMOND CITY COUNTY, VA	\$246,513.40	0.05%	99.16%
MARION COUNTY, IN	\$231,290.82	0.05%	99.21%
FRANKLIN COUNTY, NC	\$217,998.00	0.05%	99.26%
JEFFERSON COUNTY, AL	\$189,496.94	0.04%	99.30%
OKLAHOMA COUNTY, OK	\$185,706.24	0.04%	99.34%
GUILFORD COUNTY, NC	\$182,386.06	0.04%	99.38%
WARREN COUNTY, KY	\$178,816.00	0.04%	99.42%
HENNEPIN COUNTY, MN	\$163,899.20	0.04%	99.45%
NEW CASTLE COUNTY, DE	\$153,618.10	0.03%	99.49%
INTERNATIONAL	\$135,478.00	0.03%	99.51%
NEW YORK COUNTY, NY	\$135,090.56	0.03%	99.54%
YORK COUNTY, SC	\$132,499.28	0.03%	99.57%
MIDDLESEX COUNTY, NJ	\$128,144.57	0.03%	99.60%
SAINT CROIX COUNTY, WI	\$118,117.99	0.03%	99.63%

MGT COUNTY, STATE	PRIME ONLY & SUB ONLY PAYMENTS	PERCENT	CUMULATIVE PERCENT
NORFOLK CITY COUNTY, VA	\$114,904.15	0.02%	99.65%
MAHONING COUNTY, OH	\$111,356.37	0.02%	99.67%
CHESTER COUNTY, PA	\$102,321.75	0.02%	99.70%
BAY COUNTY, FL	\$98,454.22	0.02%	99.72%
LEHIGH COUNTY, PA	\$96,822.61	0.02%	99.74%
BEXAR COUNTY, TX	\$96,529.88	0.02%	99.76%
CLARK COUNTY, NV	\$92,980.00	0.02%	99.78%
JOHNSON COUNTY, KS	\$90,441.39	0.02%	99.80%
MERCER COUNTY, NJ	\$90,330.63	0.02%	99.82%
SNYDER COUNTY, PA	\$79,406.00	0.02%	99.84%
SEMINOLE COUNTY, FL	\$60,280.00	0.01%	99.85%
GREENE COUNTY, MO	\$54,786.00	0.01%	99.86%
MARICOPA COUNTY, AZ	\$51,466.84	0.01%	99.87%
MADISON COUNTY, KY	\$47,636.00	0.01%	99.88%
WAUKESHA COUNTY, WI	\$47,407.00	0.01%	99.89%
SAN DIEGO COUNTY, CA	\$45,000.00	0.01%	99.90%
MARION COUNTY, FL	\$35,317.08	0.01%	99.91%
BRISTOL COUNTY, MA	\$32,473.20	0.01%	99.92%
LAKE COUNTY, IL	\$31,339.60	0.01%	99.92%
CUMBERLAND COUNTY, ME	\$31,200.00	0.01%	99.93%
SALT LAKE COUNTY, UT	\$29,284.90	0.01%	99.94%
WAKE COUNTY, NC	\$28,818.00	0.01%	99.94%
SUFFOLK COUNTY, NY	\$25,907.22	0.01%	99.95%
LUZERNE COUNTY, PA	\$25,400.00	0.01%	99.95%
POLK COUNTY, FL	\$24,633.00	0.01%	99.96%
COBB COUNTY, GA	\$23,745.60	0.01%	99.97%
CUYAHOGA COUNTY, OH	\$23,596.96	0.01%	99.97%
RENVILLE COUNTY, MN	\$17,015.90	0.00%	99.97%
WILLIAMSON COUNTY, TX	\$16,493.40	0.00%	99.98%
GLOUCESTER COUNTY, NJ	\$14,500.00	0.00%	99.98%
KANE COUNTY, IL	\$13,219.48	0.00%	99.98%
ADA COUNTY, ID	\$9,418.75	0.00%	99.99%
BRONX COUNTY, NY	\$9,060.00	0.00%	99.99%
PICKENS COUNTY, GA	\$8,770.00	0.00%	99.99%
FRANKLIN COUNTY, PA	\$8,745.00	0.00%	99.99%
WINNEBAGO COUNTY, WI	\$8,010.00	0.00%	99.99%
SUFFOLK CITY COUNTY, VA	\$6,333.83	0.00%	99.99%
JOHNSON COUNTY, TX	\$6,052.10	0.00%	100.00%
HORRY COUNTY, SC	\$5,967.50	0.00%	100.00%
CECIL COUNTY, MD	\$5,629.00	0.00%	100.00%

MGT COUNTY, STATE	PRIME ONLY & SUB ONLY PAYMENTS	PERCENT	CUMULATIVE PERCENT
SANTA CLARA COUNTY, CA	\$2,900.00	0.00%	100.00%
ORANGE COUNTY, NC	\$2,836.45	0.00%	100.00%
PASSAIC COUNTY, NJ	\$2,448.00	0.00%	100.00%
TOTAL	\$ 462,014,063.11		

Product Market Area

TABLE B-6.
WSSC WATER PRODUCT MARKET AREA
ALL NAICS CODES

NAICS CODE	NAICS CODE DESC	PRIME ONLY & SUB ONLY PAYMENTS	PERCENT	CUMULATIVE PERCENT
237110	Water and Sewer Line and Related Structures Construction	\$690,503,426.15	32.96%	32.96%
541330	Engineering Services	\$227,486,804.80	10.86%	43.82%
238110	Poured Concrete Foundation and Structure Contractors	\$182,897,597.24	8.73%	52.56%
541511	Custom Computer Programming Services	\$135,458,269.02	6.47%	59.02%
238210	Electrical Contractors and Other Wiring Installation Contractors	\$63,880,079.70	3.05%	62.07%
332996	Fabricated Pipe and Pipe Fitting Manufacturing	\$63,872,024.08	3.05%	65.12%
562211	Hazardous Waste Treatment and Disposal	\$52,924,471.12	2.53%	67.65%
561320	Temporary Help Services	\$43,519,908.94	2.08%	69.73%
484220	Specialized Freight (except Used Goods) Trucking, Local	\$42,806,177.03	2.04%	71.77%
424690	Other Chemical and Allied Products Merchant Wholesalers	\$39,147,395.43	1.87%	73.64%
423840	Industrial Supplies Merchant Wholesalers	\$36,954,319.07	1.76%	75.40%
238910	Site Preparation Contractors	\$32,498,453.89	1.55%	76.95%
541620	Environmental Consulting Services	\$25,936,375.41	1.24%	78.19%
541370	Surveying and Mapping (except Geophysical) Services	\$19,667,530.49	0.94%	79.13%
238220	Plumbing, Heating, and Air-Conditioning Contractors	\$19,431,232.37	0.93%	80.06%
423320	Brick, Stone, and Related Construction Material Merchant Wholesalers	\$19,329,387.32	0.92%	80.98%
541380	Testing Laboratories	\$19,223,206.80	0.92%	81.90%
423720	Plumbing and Heating Equipment and Supplies (Hydronics) Merchant Wholesalers	\$16,774,622.10	0.80%	82.70%

NAICS CODE	NAICS CODE DESC	PRIME ONLY & SUB ONLY PAYMENTS	PERCENT	CUMULATIVE PERCENT
423810	Construction and Mining (except Oil Well) Machinery and Equipment Merchant Wholesalers	\$15,041,529.03	0.72%	83.42%
541611	Administrative Management and General Management Consulting Services	\$14,950,427.17	0.71%	84.13%
541350	Building Inspection Services	\$14,574,551.65	0.70%	84.83%
237310	Highway, Street, and Bridge Construction	\$13,519,205.85	0.65%	85.47%
423430	Computer and Computer Peripheral Equipment and Software Merchant Wholesalers	\$12,949,711.93	0.62%	86.09%
562998	All Other Miscellaneous Waste Management Services	\$11,687,047.52	0.56%	86.65%
238320	Painting and Wall Covering Contractors	\$11,212,802.50	0.54%	87.18%
561790	Other Services to Buildings and Dwellings	\$11,036,753.48	0.53%	87.71%
334514	Totalizing Fluid Meter and Counting Device Manufacturing	\$11,019,241.38	0.53%	88.24%
423390	Other Construction Material Merchant Wholesalers	\$10,908,292.17	0.52%	88.76%
532412	Construction, Mining, and Forestry Machinery and Equipment Rental and Leasing	\$10,769,656.08	0.51%	89.27%
561730	Landscaping Services	\$10,762,707.07	0.51%	89.79%
423610	Electrical Apparatus and Equipment, Wiring Supplies, and Related Equipment Merchant Wholesalers	\$10,443,816.13	0.50%	90.28%
811310	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	\$9,617,576.49	0.46%	90.74%
454310	Fuel Dealers	\$8,723,578.50	0.42%	91.16%
561720	Janitorial Services	\$8,464,958.05	0.40%	91.56%
441110	New Car Dealers	\$7,550,920.29	0.36%	91.92%
236220	Commercial and Institutional Building Construction	\$7,205,448.99	0.34%	92.27%
541360	Geophysical Surveying and Mapping Services	\$6,997,225.22	0.33%	92.60%
423830	Industrial Machinery and Equipment Merchant Wholesalers	\$6,309,212.39	0.30%	92.90%
238290	Other Building Equipment Contractors	\$6,245,518.51	0.30%	93.20%
238990	All Other Specialty Trade Contractors	\$6,002,640.42	0.29%	93.49%
561621	Security Systems Services (except Locksmiths)	\$5,853,513.13	0.28%	93.77%
561612	Security Guards and Patrol Services	\$5,279,647.24	0.25%	94.02%
541690	Other Scientific and Technical Consulting Services	\$4,968,365.22	0.24%	94.26%
541111	Offices of Lawyers	\$4,894,364.55	0.23%	94.49%

NAICS CODE	NAICS CODE DESC	PRIME ONLY & SUB ONLY PAYMENTS	PERCENT	CUMULATIVE PERCENT
562112	Hazardous Waste Collection	\$4,687,813.92	0.22%	94.71%
324121	Asphalt Paving Mixture and Block Manufacturing	\$4,409,565.15	0.21%	94.93%
237990	Other Heavy and Civil Engineering Construction	\$4,209,239.00	0.20%	95.13%
238160	Roofing Contractors	\$3,890,222.52	0.19%	95.31%
561990	All Other Support Services	\$3,723,106.61	0.18%	95.49%
518210	Data Processing, Hosting, and Related Services	\$3,622,210.96	0.17%	95.66%
541512	Computer Systems Design Services	\$3,556,501.05	0.17%	95.83%
325320	Pesticide and Other Agricultural Chemical Manufacturing	\$3,471,611.04	0.17%	96.00%
332911	Industrial Valve Manufacturing	\$3,241,466.31	0.15%	96.15%
541930	Translation and Interpretation Services	\$3,198,480.85	0.15%	96.31%
332999	All Other Miscellaneous Fabricated Metal Product Manufacturing	\$2,986,221.41	0.14%	96.45%
561439	Other Business Service Centers (including Copy Shops)	\$2,914,254.46	0.14%	96.59%
511210	Software Publishers	\$2,839,204.80	0.14%	96.72%
238140	Masonry Contractors	\$2,630,765.31	0.13%	96.85%
811219	Other Electronic and Precision Equipment Repair and Maintenance	\$2,593,075.02	0.12%	96.97%
423490	Other Professional Equipment and Supplies Merchant Wholesalers	\$2,411,926.66	0.12%	97.09%
442110	Furniture Stores	\$2,310,975.20	0.11%	97.20%
812331	Linen Supply	\$2,230,949.18	0.11%	97.30%
424120	Stationery and Office Supplies Merchant Wholesalers	\$2,050,655.16	0.10%	97.40%
238120	Structural Steel and Precast Concrete Contractors	\$1,967,810.97	0.09%	97.50%
423710	Hardware Merchant Wholesalers	\$1,853,371.38	0.09%	97.58%
441320	Tire Dealers	\$1,757,910.85	0.08%	97.67%
562910	Remediation Services	\$1,686,486.30	0.08%	97.75%
327332	Concrete Pipe Manufacturing	\$1,682,335.70	0.08%	97.83%
532420	Office Machinery and Equipment Rental and Leasing	\$1,629,416.05	0.08%	97.91%
237120	Oil and Gas Pipeline and Related Structures Construction	\$1,592,478.62	0.08%	97.98%
541990	All Other Professional, Scientific, and Technical Services	\$1,511,838.22	0.07%	98.06%
541310	Architectural Services	\$1,503,909.95	0.07%	98.13%
238190	Other Foundation, Structure, and Building Exterior Contractors	\$1,487,835.98	0.07%	98.20%

NAICS CODE	NAICS CODE DESC	PRIME ONLY & SUB ONLY PAYMENTS	PERCENT	CUMULATIVE PERCENT
562219	Other Nonhazardous Waste Treatment and Disposal	\$1,408,048.50	0.07%	98.27%
423420	Office Equipment Merchant Wholesalers	\$1,362,463.37	0.07%	98.33%
541612	Human Resources Consulting Services	\$1,306,994.75	0.06%	98.39%
811121	Automotive Body, Paint, and Interior Repair and Maintenance	\$1,230,831.73	0.06%	98.45%
561440	Collection Agencies	\$1,196,677.20	0.06%	98.51%
541820	Public Relations Agencies	\$1,192,400.35	0.06%	98.57%
561421	Telephone Answering Services	\$1,155,572.75	0.06%	98.62%
611430	Professional and Management Development Training	\$1,087,078.45	0.05%	98.67%
524126	Direct Property and Casualty Insurance Carriers	\$1,046,746.00	0.05%	98.72%
541613	Marketing Consulting Services	\$1,045,856.80	0.05%	98.77%
541519	Other Computer Related Services	\$976,618.56	0.05%	98.82%
561611	Investigation Services	\$972,578.19	0.05%	98.87%
441310	Automotive Parts and Accessories Stores	\$800,481.32	0.04%	98.90%
562991	Septic Tank and Related Services	\$769,000.62	0.04%	98.94%
488490	Other Support Activities for Road Transportation	\$757,304.21	0.04%	98.98%
811212	Computer and Office Machine Repair and Maintenance	\$722,913.85	0.03%	99.01%
334513	Instruments and Related Products Manufacturing for Measuring, Displaying, and Controlling Industrial Process Variables	\$689,982.79	0.03%	99.04%
541340	Drafting Services	\$689,473.83	0.03%	99.08%
562111	Solid Waste Collection	\$676,215.02	0.03%	99.11%
424950	Paint, Varnish, and Supplies Merchant Wholesalers	\$661,766.94	0.03%	99.14%
324191	Petroleum Lubricating Oil and Grease Manufacturing	\$656,719.11	0.03%	99.17%
493190	Other Warehousing and Storage	\$654,637.68	0.03%	99.20%
334516	Analytical Laboratory Instrument Manufacturing	\$566,656.00	0.03%	99.23%
423850	Service Establishment Equipment and Supplies Merchant Wholesalers	\$542,805.70	0.03%	99.26%
423860	Transportation Equipment and Supplies (except Motor Vehicle) Merchant Wholesalers	\$530,632.11	0.03%	99.28%
423440	Other Commercial Equipment Merchant Wholesalers	\$517,863.33	0.02%	99.31%
237130	Power and Communication Line and Related Structures Construction	\$505,479.46	0.02%	99.33%
336212	Truck Trailer Manufacturing	\$476,638.15	0.02%	99.35%

NAICS CODE	NAICS CODE DESC	PRIME ONLY & SUB ONLY PAYMENTS	PERCENT	CUMULATIVE PERCENT
811111	General Automotive Repair	\$472,440.84	0.02%	99.38%
423450	Medical, Dental, and Hospital Equipment and Supplies Merchant Wholesalers	\$461,191.10	0.02%	99.40%
331210	Iron and Steel Pipe and Tube Manufacturing from Purchased Steel	\$459,820.61	0.02%	99.42%
541211	Offices of Certified Public Accountants	\$457,861.60	0.02%	99.44%
524298	All Other Insurance Related Activities	\$445,691.76	0.02%	99.46%
423690	Other Electronic Parts and Equipment Merchant Wholesalers	\$440,164.64	0.02%	99.48%
523930	Investment Advice	\$431,835.98	0.02%	99.50%
541618	Other Management Consulting Services	\$400,022.04	0.02%	99.52%
238310	Drywall and Insulation Contractors	\$398,140.00	0.02%	99.54%
221310	Water Supply and Irrigation Systems	\$361,120.00	0.02%	99.56%
541810	Advertising Agencies	\$337,655.50	0.02%	99.58%
512110	Motion Picture and Video Production	\$329,032.33	0.02%	99.59%
541219	Other Accounting Services	\$309,201.20	0.01%	99.61%
333996	Fluid Power Pump and Motor Manufacturing	\$295,720.00	0.01%	99.62%
611420	Computer Training	\$290,292.28	0.01%	99.63%
238350	Finish Carpentry Contractors	\$286,703.00	0.01%	99.65%
611519	Other Technical and Trade Schools	\$271,562.70	0.01%	99.66%
334310	Audio and Video Equipment Manufacturing	\$245,405.91	0.01%	99.67%
561311	Employment Placement Agencies	\$240,998.98	0.01%	99.68%
441222	Boat Dealers	\$217,998.00	0.01%	99.69%
541410	Interior Design Services	\$212,017.56	0.01%	99.70%
332710	Machine Shops	\$206,566.00	0.01%	99.71%
327320	Ready-Mix Concrete Manufacturing	\$203,120.57	0.01%	99.72%
325120	Industrial Gas Manufacturing	\$203,011.73	0.01%	99.73%
561312	Executive Search Services	\$198,640.33	0.01%	99.74%
488410	Motor Vehicle Towing	\$196,385.50	0.01%	99.75%
323111	Commercial Printing (except Screen and Books)	\$192,923.04	0.01%	99.76%
339950	Sign Manufacturing	\$187,022.46	0.01%	99.77%
423310	Lumber, Plywood, Millwork, and Wood Panel Merchant Wholesalers	\$181,766.14	0.01%	99.78%
238150	Glass and Glazing Contractors	\$175,104.00	0.01%	99.79%
423990	Other Miscellaneous Durable Goods Merchant Wholesalers	\$167,484.93	0.01%	99.80%
524210	Insurance Agencies and Brokerages	\$156,425.00	0.01%	99.80%
541890	Other Services Related to Advertising	\$156,171.34	0.01%	99.81%
335999	All Other Miscellaneous Electrical Equipment and Component Manufacturing	\$150,776.82	0.01%	99.82%

NAICS CODE	NAICS CODE DESC	PRIME ONLY & SUB ONLY PAYMENTS	PERCENT	CUMULATIVE PERCENT
561920	Convention and Trade Show Organizers	\$149,325.06	0.01%	99.83%
424340	Footwear Merchant Wholesalers	\$149,191.22	0.01%	99.83%
325998	All Other Miscellaneous Chemical Product and Preparation Manufacturing	\$137,774.14	0.01%	99.84%
337212	Custom Architectural Woodwork and Millwork Manufacturing	\$135,533.00	0.01%	99.85%
541513	Computer Facilities Management Services	\$134,636.29	0.01%	99.85%
561422	Telemarketing Bureaus and Other Contact Centers	\$129,665.88	0.01%	99.86%
334290	Other Communications Equipment Manufacturing	\$125,216.81	0.01%	99.86%
484210	Used Household and Office Goods Moving	\$121,903.86	0.01%	99.87%
423110	Automobile and Other Motor Vehicle Merchant Wholesalers	\$120,252.26	0.01%	99.88%
561450	Credit Bureaus	\$119,995.00	0.01%	99.88%
561710	Exterminating and Pest Control Services	\$115,662.28	0.01%	99.89%
493110	General Warehousing and Storage	\$113,360.13	0.01%	99.89%
334118	Computer Terminal and Other Computer Peripheral Equipment Manufacturing	\$110,631.11	0.01%	99.90%
532490	Other Commercial and Industrial Machinery and Equipment Rental and Leasing	\$100,000.00	0.00%	99.90%
562212	Solid Waste Landfill	\$97,601.69	0.00%	99.91%
491110	Postal Service	\$93,631.42	0.00%	99.91%
541922	Commercial Photography	\$93,454.03	0.00%	99.92%
811122	Automotive Glass Replacement Shops	\$88,511.62	0.00%	99.92%
811118	Other Automotive Mechanical and Electrical Repair and Maintenance	\$88,217.32	0.00%	99.92%
811192	Car Washes	\$85,935.42	0.00%	99.93%
562119	Other Waste Collection	\$80,993.85	0.00%	99.93%
561499	All Other Business Support Services	\$79,789.50	0.00%	99.94%
333249	Other Industrial Machinery Manufacturing	\$79,326.00	0.00%	99.94%
541199	All Other Legal Services	\$78,647.49	0.00%	99.94%
423820	Farm and Garden Machinery and Equipment Merchant Wholesalers	\$78,256.04	0.00%	99.95%
238330	Flooring Contractors	\$75,614.00	0.00%	99.95%
541430	Graphic Design Services	\$69,693.40	0.00%	99.95%
333912	Air and Gas Compressor Manufacturing	\$68,736.85	0.00%	99.96%
424110	Printing and Writing Paper Merchant Wholesalers	\$63,251.32	0.00%	99.96%
811412	Appliance Repair and Maintenance	\$56,215.53	0.00%	99.96%
333318	Other Commercial and Service Industry Machinery Manufacturing	\$51,820.00	0.00%	99.97%

NAICS CODE	NAICS CODE DESC	PRIME ONLY & SUB ONLY PAYMENTS	PERCENT	CUMULATIVE PERCENT
332994	Small Arms, Ordnance, and Ordnance Accessories Manufacturing	\$48,958.57	0.00%	99.97%
722320	Caterers	\$44,287.00	0.00%	99.97%
492110	Couriers and Express Delivery Services	\$41,345.89	0.00%	99.97%
238390	Other Building Finishing Contractors	\$40,400.00	0.00%	99.97%
611691	Exam Preparation and Tutoring	\$39,900.03	0.00%	99.98%
611699	All Other Miscellaneous Schools and Instruction	\$38,050.00	0.00%	99.98%
488991	Packing and Crating	\$36,771.29	0.00%	99.98%
444220	Nursery, Garden Center, and Farm Supply Stores	\$30,825.40	0.00%	99.98%
321911	Wood Window and Door Manufacturing	\$28,762.00	0.00%	99.98%
541320	Landscape Architectural Services	\$26,233.56	0.00%	99.98%
337215	Showcase, Partition, Shelving, and Locker Manufacturing	\$24,100.00	0.00%	99.98%
238340	Tile and Terrazzo Contractors	\$23,325.00	0.00%	99.99%
115112	Soil Preparation, Planting, and Cultivating	\$21,086.00	0.00%	99.99%
112511	Finfish Farming and Fish Hatcheries	\$18,500.00	0.00%	99.99%
325211	Plastics Material and Resin Manufacturing	\$17,598.00	0.00%	99.99%
423510	Metal Service Centers and Other Metal Merchant Wholesalers	\$17,301.63	0.00%	99.99%
524291	Claims Adjusting	\$17,038.00	0.00%	99.99%
333120	Construction Machinery Manufacturing	\$17,015.90	0.00%	99.99%
561613	Armored Car Services	\$16,800.52	0.00%	99.99%
327211	Flat Glass Manufacturing	\$16,440.00	0.00%	99.99%
811211	Consumer Electronics Repair and Maintenance	\$16,305.50	0.00%	99.99%
485510	Charter Bus Industry	\$15,238.95	0.00%	99.99%
519130	Internet Publishing and Broadcasting and Web Search Portals	\$13,800.00	0.00%	99.99%
541490	Other Specialized Design Services	\$12,850.00	0.00%	100.00%
424920	Book, Periodical, and Newspaper Merchant Wholesalers	\$10,662.00	0.00%	100.00%
611710	Educational Support Services	\$10,462.00	0.00%	100.00%
322110	Pulp Mills	\$10,390.00	0.00%	100.00%
621340	Offices of Physical, Occupational and Speech Therapists, and Audiologists	\$10,171.49	0.00%	100.00%
331511	Iron Foundries	\$8,010.00	0.00%	100.00%
711510	Independent Artists, Writers, and Performers	\$6,100.00	0.00%	100.00%
423620	Household Appliances, Electric Housewares, and Consumer Electronics Merchant Wholesalers	\$5,452.74	0.00%	100.00%

NAICS CODE	NAICS CODE DESC	PRIME ONLY & SUB ONLY PAYMENTS	PERCENT	CUMULATIVE PERCENT
333413	Industrial and Commercial Fan and Blower and Air Purification Equipment Manufacturing	\$5,214.27	0.00%	100.00%
561492	Court Reporting and Stenotype Services	\$4,636.20	0.00%	100.00%
541614	Process, Physical Distribution, and Logistics Consulting Services	\$4,600.00	0.00%	100.00%
332311	Prefabricated Metal Building and Component Manufacturing	\$4,015.00	0.00%	100.00%
812320	Drycleaning and Laundry Services (except Coin-Operated)	\$2,979.02	0.00%	100.00%
337920	Blind and Shade Manufacturing	\$2,850.00	0.00%	100.00%
444130	Hardware Stores	\$2,507.00	0.00%	100.00%
335312	Motor and Generator Manufacturing	\$2,448.00	0.00%	100.00%
621112	Offices of Physicians, Mental Health Specialists	\$1,500.00	0.00%	100.00%
TOTAL		\$2,094,700,114.69		

TABLE B-7.
WSSC WATER PRODUCT MARKET AREA
CONSTRUCTION NAICS CODES

NAICS CODE	NAICS CODE DESC	PRIME ONLY & SUB ONLY PAYMENTS	PERCENT	CUMULATIVE PERCENT
237110	Water and Sewer Line and Related Structures Construction	\$686,574,946.27	58.64%	58.64%
238110	Poured Concrete Foundation and Structure Contractors	\$182,897,597.24	15.62%	74.26%
238210	Electrical Contractors and Other Wiring Installation Contractors	\$63,781,887.19	5.45%	79.71%
238910	Site Preparation Contractors	\$32,023,052.92	2.73%	82.44%
484220	Specialized Freight (except Used Goods) Trucking, Local	\$27,952,880.26	2.39%	84.83%
541330	Engineering Services	\$26,743,325.83	2.28%	87.11%
238220	Plumbing, Heating, and Air-Conditioning Contractors	\$19,431,232.37	1.66%	88.77%
423320	Brick, Stone, and Related Construction Material Merchant Wholesalers	\$15,987,993.45	1.37%	90.14%
237310	Highway, Street, and Bridge Construction	\$13,519,205.85	1.15%	91.29%
238320	Painting and Wall Covering Contractors	\$11,212,802.50	0.96%	92.25%
532412	Construction, Mining, and Forestry Machinery and Equipment Rental and Leasing	\$7,337,738.74	0.63%	92.88%
236220	Commercial and Institutional Building Construction	\$6,999,784.71	0.60%	93.47%
541370	Surveying and Mapping (except Geophysical) Services	\$6,694,970.74	0.57%	94.05%
423390	Other Construction Material Merchant Wholesalers	\$6,406,887.09	0.55%	94.59%
238290	Other Building Equipment Contractors	\$6,245,518.51	0.53%	95.13%
238990	All Other Specialty Trade Contractors	\$6,002,640.42	0.51%	95.64%
541380	Testing Laboratories	\$4,495,208.65	0.38%	96.02%
562112	Hazardous Waste Collection	\$4,322,623.00	0.37%	96.39%
238160	Roofing Contractors	\$3,890,222.52	0.33%	96.72%
237990	Other Heavy and Civil Engineering Construction	\$3,748,366.38	0.32%	97.04%
423720	Plumbing and Heating Equipment and Supplies (Hydronics) Merchant Wholesalers	\$3,105,657.29	0.27%	97.31%
332999	All Other Miscellaneous Fabricated Metal Product Manufacturing	\$2,930,754.00	0.25%	97.56%
561730	Landscaping Services	\$2,661,271.96	0.23%	97.79%

NAICS CODE	NAICS CODE DESC	PRIME ONLY & SUB ONLY PAYMENTS	PERCENT	CUMULATIVE PERCENT
238140	Masonry Contractors	\$2,630,765.31	0.22%	98.01%
423610	Electrical Apparatus and Equipment, Wiring Supplies, and Related Equipment Merchant Wholesalers	\$2,484,084.82	0.21%	98.22%
238120	Structural Steel and Precast Concrete Contractors	\$1,967,810.97	0.17%	98.39%
561990	All Other Support Services	\$1,907,092.30	0.16%	98.56%
423710	Hardware Merchant Wholesalers	\$1,817,290.17	0.16%	98.71%
237120	Oil and Gas Pipeline and Related Structures Construction	\$1,592,478.62	0.14%	98.85%
562910	Remediation Services	\$1,415,202.67	0.12%	98.97%
324121	Asphalt Paving Mixture and Block Manufacturing	\$1,323,973.58	0.11%	99.08%
562219	Other Nonhazardous Waste Treatment and Disposal	\$1,319,789.00	0.11%	99.19%
238190	Other Foundation, Structure, and Building Exterior Contractors	\$1,205,745.75	0.10%	99.30%
423840	Industrial Supplies Merchant Wholesalers	\$1,169,846.19	0.10%	99.40%
454310	Fuel Dealers	\$959,268.90	0.08%	99.48%
424950	Paint, Varnish, and Supplies Merchant Wholesalers	\$661,766.94	0.06%	99.53%
562991	Septic Tank and Related Services	\$619,555.00	0.05%	99.59%
423830	Industrial Machinery and Equipment Merchant Wholesalers	\$594,774.59	0.05%	99.64%
237130	Power and Communication Line and Related Structures Construction	\$505,479.46	0.04%	99.68%
331210	Iron and Steel Pipe and Tube Manufacturing from Purchased Steel	\$459,820.61	0.04%	99.72%
238310	Drywall and Insulation Contractors	\$398,140.00	0.03%	99.75%
562998	All Other Miscellaneous Waste Management Services	\$305,846.80	0.03%	99.78%
238350	Finish Carpentry Contractors	\$286,703.00	0.02%	99.81%
541512	Computer Systems Design Services	\$249,100.10	0.02%	99.83%
327320	Ready-Mix Concrete Manufacturing	\$203,120.57	0.02%	99.84%
238150	Glass and Glazing Contractors	\$175,104.00	0.01%	99.86%
442110	Furniture Stores	\$160,943.00	0.01%	99.87%
524210	Insurance Agencies and Brokerages	\$156,425.00	0.01%	99.89%
561320	Temporary Help Services	\$141,170.52	0.01%	99.90%
337212	Custom Architectural Woodwork and Millwork Manufacturing	\$135,533.00	0.01%	99.91%
541310	Architectural Services	\$135,193.00	0.01%	99.92%
541511	Custom Computer Programming Services	\$125,033.15	0.01%	99.93%

NAICS CODE	NAICS CODE DESC	PRIME ONLY & SUB ONLY PAYMENTS	PERCENT	CUMULATIVE PERCENT
562212	Solid Waste Landfill	\$97,601.69	0.01%	99.94%
541922	Commercial Photography	\$93,454.03	0.01%	99.95%
562119	Other Waste Collection	\$78,914.85	0.01%	99.96%
238330	Flooring Contractors	\$75,614.00	0.01%	99.96%
541620	Environmental Consulting Services	\$61,351.60	0.01%	99.97%
561612	Security Guards and Patrol Services	\$52,800.00	0.00%	99.97%
423310	Lumber, Plywood, Millwork, and Wood Panel Merchant Wholesalers	\$46,785.43	0.00%	99.98%
561720	Janitorial Services	\$39,173.00	0.00%	99.98%
423810	Construction and Mining (except Oil Well) Machinery and Equipment Merchant Wholesalers	\$38,235.17	0.00%	99.98%
541611	Administrative Management and General Management Consulting Services	\$34,109.00	0.00%	99.98%
444220	Nursery, Garden Center, and Farm Supply Stores	\$30,825.40	0.00%	99.99%
321911	Wood Window and Door Manufacturing	\$28,762.00	0.00%	99.99%
337215	Showcase, Partition, Shelving, and Locker Manufacturing	\$24,100.00	0.00%	99.99%
238340	Tile and Terrazzo Contractors	\$23,325.00	0.00%	99.99%
327211	Flat Glass Manufacturing	\$16,440.00	0.00%	100.00%
541490	Other Specialized Design Services	\$12,850.00	0.00%	100.00%
562111	Solid Waste Collection	\$10,742.00	0.00%	100.00%
339950	Sign Manufacturing	\$9,509.80	0.00%	100.00%
423620	Household Appliances, Electric Housewares, and Consumer Electronics Merchant Wholesalers	\$5,452.74	0.00%	100.00%
541360	Geophysical Surveying and Mapping Services	\$5,400.00	0.00%	100.00%
332311	Prefabricated Metal Building and Component Manufacturing	\$4,015.00	0.00%	100.00%
337920	Blind and Shade Manufacturing	\$2,850.00	0.00%	100.00%
444130	Hardware Stores	\$2,507.00	0.00%	100.00%
423490	Other Professional Equipment and Supplies Merchant Wholesalers	\$1,662.00	0.00%	100.00%
	TOTAL	\$1,170,870,104.62		100.00%

TABLE B-8.
WSSC WATER PRODUCT MARKET AREA
ARCHITECTURE & ENGINEERING NAICS CODES

NAICS CODE	NAICS CODE DESC	PRIME ONLY & SUB ONLY PAYMENTS	PERCENT	CUMULATIVE PERCENT
541330	Engineering Services	\$192,796,932.64	77.80%	77.80%
541350	Building Inspection Services	\$14,574,551.65	5.88%	83.69%
541370	Surveying and Mapping (except Geophysical) Services	\$11,641,309.54	4.70%	88.38%
541380	Testing Laboratories	\$10,155,968.95	4.10%	92.48%
541360	Geophysical Surveying and Mapping Services	\$6,522,197.42	2.63%	95.12%
561320	Temporary Help Services	\$3,604,001.84	1.45%	96.57%
541620	Environmental Consulting Services	\$1,532,128.90	0.62%	97.19%
237110	Water and Sewer Line and Related Structures Construction	\$1,436,302.39	0.58%	97.77%
541310	Architectural Services	\$1,242,502.31	0.50%	98.27%
541611	Administrative Management and General Management Consulting Services	\$818,408.23	0.33%	98.60%
541340	Drafting Services	\$689,473.83	0.28%	98.88%
541511	Custom Computer Programming Services	\$651,683.29	0.26%	99.14%
562998	All Other Miscellaneous Waste Management Services	\$463,039.00	0.19%	99.33%
561990	All Other Support Services	\$444,300.96	0.18%	99.51%
237990	Other Heavy and Civil Engineering Construction	\$311,997.62	0.13%	99.63%
238190	Other Foundation, Structure, and Building Exterior Contractors	\$282,090.23	0.11%	99.75%
541820	Public Relations Agencies	\$215,947.65	0.09%	99.83%
562991	Septic Tank and Related Services	\$104,500.00	0.04%	99.88%
562112	Hazardous Waste Collection	\$85,732.92	0.03%	99.91%
532412	Construction, Mining, and Forestry Machinery and Equipment Rental and Leasing	\$76,340.00	0.03%	99.94%
562211	Hazardous Waste Treatment and Disposal	\$44,609.26	0.02%	99.96%
423390	Other Construction Material Merchant Wholesalers	\$39,972.93	0.02%	99.98%
423610	Electrical Apparatus and Equipment, Wiring Supplies, and Related Equipment Merchant Wholesalers	\$27,919.58	0.01%	99.99%
541320	Landscape Architectural Services	\$26,233.56	0.01%	100.00%

NAICS CODE	NAICS CODE DESC	PRIME ONLY & SUB ONLY PAYMENTS	PERCENT	CUMULATIVE PERCENT
562910	Remediation Services	\$7,376.69	0.00%	100.00%
TOTAL		\$247,795,521.39		100.00%

TABLE B-9.
WSSC WATER PRODUCT MARKET AREA
PROFESSIONAL SERVICES NAICS CODES

NAICS CODE	NAICS CODE DESC	PRIME ONLY & SUB ONLY PAYMENTS	PERCENT	CUMULATIVE PERCENT
541511	Custom Computer Programming Services	\$132,420,574.58	61.87%	61.87%
541620	Environmental Consulting Services	\$24,342,894.91	11.37%	73.25%
541611	Administrative Management and General Management Consulting Services	\$14,089,189.94	6.58%	79.83%
541330	Engineering Services	\$6,069,090.22	2.84%	82.67%
541690	Other Scientific and Technical Consulting Services	\$4,968,365.22	2.32%	84.99%
541111	Offices of Lawyers	\$4,894,364.55	2.29%	87.27%
541380	Testing Laboratories	\$4,569,753.20	2.14%	89.41%
532412	Construction, Mining, and Forestry Machinery and Equipment Rental and Leasing	\$3,355,577.34	1.57%	90.98%
541930	Translation and Interpretation Services	\$3,198,480.85	1.49%	92.47%
541512	Computer Systems Design Services	\$1,660,178.56	0.78%	93.25%
532420	Office Machinery and Equipment Rental and Leasing	\$1,629,416.05	0.76%	94.01%
541990	All Other Professional, Scientific, and Technical Services	\$1,511,838.22	0.71%	94.72%
541612	Human Resources Consulting Services	\$1,306,994.75	0.61%	95.33%
611430	Professional and Management Development Training	\$1,087,078.45	0.51%	95.83%
524126	Direct Property and Casualty Insurance Carriers	\$1,046,746.00	0.49%	96.32%
541613	Marketing Consulting Services	\$1,045,856.80	0.49%	96.81%
541519	Other Computer Related Services	\$976,618.56	0.46%	97.27%
541820	Public Relations Agencies	\$976,452.70	0.46%	97.72%
541360	Geophysical Surveying and Mapping Services	\$469,627.80	0.22%	97.94%
541211	Offices of Certified Public Accountants	\$457,861.60	0.21%	98.16%
524298	All Other Insurance Related Activities	\$445,691.76	0.21%	98.37%
523930	Investment Advice	\$431,835.98	0.20%	98.57%
541810	Advertising Agencies	\$337,655.50	0.16%	98.73%

NAICS CODE	NAICS CODE DESC	PRIME ONLY & SUB ONLY PAYMENTS	PERCENT	CUMULATIVE PERCENT
541219	Other Accounting Services	\$309,201.20	0.14%	98.87%
611420	Computer Training	\$290,292.28	0.14%	99.01%
611519	Other Technical and Trade Schools	\$271,562.70	0.13%	99.13%
541618	Other Management Consulting Services	\$266,596.41	0.12%	99.26%
237110	Water and Sewer Line and Related Structures Construction	\$220,040.50	0.10%	99.36%
541410	Interior Design Services	\$212,017.56	0.10%	99.46%
541890	Other Services Related to Advertising	\$156,171.34	0.07%	99.53%
541513	Computer Facilities Management Services	\$134,636.29	0.06%	99.59%
541310	Architectural Services	\$126,214.64	0.06%	99.65%
532490	Other Commercial and Industrial Machinery and Equipment Rental and Leasing	\$100,000.00	0.05%	99.70%
541370	Surveying and Mapping (except Geophysical) Services	\$84,469.24	0.04%	99.74%
541199	All Other Legal Services	\$78,647.49	0.04%	99.78%
561990	All Other Support Services	\$77,515.00	0.04%	99.81%
541430	Graphic Design Services	\$69,693.40	0.03%	99.85%
238910	Site Preparation Contractors	\$61,258.40	0.03%	99.87%
423320	Brick, Stone, and Related Construction Material Merchant Wholesalers	\$59,911.72	0.03%	99.90%
561730	Landscaping Services	\$51,192.30	0.02%	99.93%
611691	Exam Preparation and Tutoring	\$39,900.03	0.02%	99.94%
611699	All Other Miscellaneous Schools and Instruction	\$38,050.00	0.02%	99.96%
561439	Other Business Service Centers (including Copy Shops)	\$21,152.00	0.01%	99.97%
524291	Claims Adjusting	\$17,038.00	0.01%	99.98%
561320	Temporary Help Services	\$15,988.04	0.01%	99.99%
611710	Educational Support Services	\$10,462.00	0.00%	99.99%
621340	Offices of Physical, Occupational and Speech Therapists, and Audiologists	\$10,171.49	0.00%	100.00%
541614	Process, Physical Distribution, and Logistics Consulting Services	\$4,600.00	0.00%	100.00%
621112	Offices of Physicians, Mental Health Specialists	\$1,500.00	0.00%	100.00%
	TOTAL	\$214,020,425.57		

TABLE B-10.
WSSC WATER PRODUCT MARKET AREA
GOODS & SERVICES NAICS CODES

NAICS CODE	NAICS CODE DESC	PRIME ONLY & SUB ONLY PAYMENTS	PERCENT	CUMULATIVE PERCENT
332996	Fabricated Pipe and Pipe Fitting Manufacturing	\$63,872,024.08	13.82%	13.82%
562211	Hazardous Waste Treatment and Disposal	\$52,879,861.86	11.45%	25.27%
561320	Temporary Help Services	\$39,758,748.54	8.61%	33.88%
424690	Other Chemical and Allied Products Merchant Wholesalers	\$39,147,395.43	8.47%	42.35%
423840	Industrial Supplies Merchant Wholesalers	\$35,784,472.88	7.75%	50.09%
423810	Construction and Mining (except Oil Well) Machinery and Equipment Merchant Wholesalers	\$15,003,293.86	3.25%	53.34%
484220	Specialized Freight (except Used Goods) Trucking, Local	\$14,853,296.77	3.21%	56.56%
423720	Plumbing and Heating Equipment and Supplies (Hydronics) Merchant Wholesalers	\$13,668,964.81	2.96%	59.52%
423430	Computer and Computer Peripheral Equipment and Software Merchant Wholesalers	\$12,949,711.93	2.80%	62.32%
561790	Other Services to Buildings and Dwellings	\$11,036,753.48	2.39%	64.71%
334514	Totalizing Fluid Meter and Counting Device Manufacturing	\$11,019,241.38	2.39%	67.09%
562998	All Other Miscellaneous Waste Management Services	\$10,918,161.72	2.36%	69.46%
811310	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	\$9,617,576.49	2.08%	71.54%
561720	Janitorial Services	\$8,425,785.05	1.82%	73.36%
561730	Landscaping Services	\$8,050,242.81	1.74%	75.10%
423610	Electrical Apparatus and Equipment, Wiring Supplies, and Related Equipment Merchant Wholesalers	\$7,931,811.73	1.72%	76.82%
454310	Fuel Dealers	\$7,764,309.60	1.68%	78.50%
441110	New Car Dealers	\$7,550,920.29	1.63%	80.13%
561621	Security Systems Services (except Locksmiths)	\$5,853,513.13	1.27%	81.40%
423830	Industrial Machinery and Equipment Merchant Wholesalers	\$5,714,437.80	1.24%	82.64%
561612	Security Guards and Patrol Services	\$5,226,847.24	1.13%	83.77%

NAICS CODE	NAICS CODE DESC	PRIME ONLY & SUB ONLY PAYMENTS	PERCENT	CUMULATIVE PERCENT
423390	Other Construction Material Merchant Wholesalers	\$4,461,432.15	0.97%	84.74%
518210	Data Processing, Hosting, and Related Services	\$3,622,210.96	0.78%	85.52%
325320	Pesticide and Other Agricultural Chemical Manufacturing	\$3,471,611.04	0.75%	86.27%
423320	Brick, Stone, and Related Construction Material Merchant Wholesalers	\$3,281,482.15	0.71%	86.98%
332911	Industrial Valve Manufacturing	\$3,241,466.31	0.70%	87.68%
324121	Asphalt Paving Mixture and Block Manufacturing	\$3,085,591.57	0.67%	88.35%
561439	Other Business Service Centers (including Copy Shops)	\$2,893,102.46	0.63%	88.98%
511210	Software Publishers	\$2,839,204.80	0.61%	89.59%
811219	Other Electronic and Precision Equipment Repair and Maintenance	\$2,593,075.02	0.56%	90.15%
423490	Other Professional Equipment and Supplies Merchant Wholesalers	\$2,410,264.66	0.52%	90.67%
237110	Water and Sewer Line and Related Structures Construction	\$2,272,136.99	0.49%	91.17%
541511	Custom Computer Programming Services	\$2,260,978.00	0.49%	91.66%
812331	Linen Supply	\$2,230,949.18	0.48%	92.14%
442110	Furniture Stores	\$2,150,032.20	0.47%	92.60%
424120	Stationery and Office Supplies Merchant Wholesalers	\$2,050,655.16	0.44%	93.05%
541330	Engineering Services	\$1,877,456.11	0.41%	93.45%
441320	Tire Dealers	\$1,757,910.85	0.38%	93.83%
327332	Concrete Pipe Manufacturing	\$1,682,335.70	0.36%	94.20%
541512	Computer Systems Design Services	\$1,647,222.39	0.36%	94.55%
423420	Office Equipment Merchant Wholesalers	\$1,362,463.37	0.29%	94.85%
561990	All Other Support Services	\$1,294,198.35	0.28%	95.13%
541370	Surveying and Mapping (except Geophysical) Services	\$1,246,780.97	0.27%	95.40%
811121	Automotive Body, Paint, and Interior Repair and Maintenance	\$1,230,831.73	0.27%	95.67%
561440	Collection Agencies	\$1,196,677.20	0.26%	95.93%
561421	Telephone Answering Services	\$1,155,572.75	0.25%	96.18%
561611	Investigation Services	\$972,578.19	0.21%	96.39%
441310	Automotive Parts and Accessories Stores	\$800,481.32	0.17%	96.56%
488490	Other Support Activities for Road Transportation	\$757,304.21	0.16%	96.72%

NAICS CODE	NAICS CODE DESC	PRIME ONLY & SUB ONLY PAYMENTS	PERCENT	CUMULATIVE PERCENT
811212	Computer and Office Machine Repair and Maintenance	\$722,913.85	0.16%	96.88%
334513	Instruments and Related Products Manufacturing for Measuring, Displaying, and Controlling Industrial Process Variables	\$689,982.79	0.15%	97.03%
562111	Solid Waste Collection	\$665,473.02	0.14%	97.17%
324191	Petroleum Lubricating Oil and Grease Manufacturing	\$656,719.11	0.14%	97.31%
493190	Other Warehousing and Storage	\$654,637.68	0.14%	97.46%
334516	Analytical Laboratory Instrument Manufacturing	\$566,656.00	0.12%	97.58%
423850	Service Establishment Equipment and Supplies Merchant Wholesalers	\$542,805.70	0.12%	97.70%
423860	Transportation Equipment and Supplies (except Motor Vehicle) Merchant Wholesalers	\$530,632.11	0.11%	97.81%
423440	Other Commercial Equipment Merchant Wholesalers	\$517,863.33	0.11%	97.92%
336212	Truck Trailer Manufacturing	\$476,638.15	0.10%	98.03%
811111	General Automotive Repair	\$472,440.84	0.10%	98.13%
423450	Medical, Dental, and Hospital Equipment and Supplies Merchant Wholesalers	\$461,191.10	0.10%	98.23%
423690	Other Electronic Parts and Equipment Merchant Wholesalers	\$440,164.64	0.10%	98.32%
238910	Site Preparation Contractors	\$414,142.57	0.09%	98.41%
221310	Water Supply and Irrigation Systems	\$361,120.00	0.08%	98.49%
512110	Motion Picture and Video Production	\$329,032.33	0.07%	98.56%
333996	Fluid Power Pump and Motor Manufacturing	\$295,720.00	0.06%	98.63%
562112	Hazardous Waste Collection	\$279,458.00	0.06%	98.69%
562910	Remediation Services	\$263,906.94	0.06%	98.74%
334310	Audio and Video Equipment Manufacturing	\$245,405.91	0.05%	98.80%
561311	Employment Placement Agencies	\$240,998.98	0.05%	98.85%
441222	Boat Dealers	\$217,998.00	0.05%	98.90%
332710	Machine Shops	\$206,566.00	0.04%	98.94%
236220	Commercial and Institutional Building Construction	\$205,664.28	0.04%	98.99%
325120	Industrial Gas Manufacturing	\$203,011.73	0.04%	99.03%
561312	Executive Search Services	\$198,640.33	0.04%	99.07%
488410	Motor Vehicle Towing	\$196,385.50	0.04%	99.12%

NAICS CODE	NAICS CODE DESC	PRIME ONLY & SUB ONLY PAYMENTS	PERCENT	CUMULATIVE PERCENT
323111	Commercial Printing (except Screen and Books)	\$192,923.04	0.04%	99.16%
339950	Sign Manufacturing	\$177,512.66	0.04%	99.20%
423990	Other Miscellaneous Durable Goods Merchant Wholesalers	\$167,484.93	0.04%	99.23%
335999	All Other Miscellaneous Electrical Equipment and Component Manufacturing	\$150,776.82	0.03%	99.26%
561920	Convention and Trade Show Organizers	\$149,325.06	0.03%	99.30%
424340	Footwear Merchant Wholesalers	\$149,191.22	0.03%	99.33%
237990	Other Heavy and Civil Engineering Construction	\$148,875.00	0.03%	99.36%
325998	All Other Miscellaneous Chemical Product and Preparation Manufacturing	\$137,774.14	0.03%	99.39%
423310	Lumber, Plywood, Millwork, and Wood Panel Merchant Wholesalers	\$134,980.71	0.03%	99.42%
541618	Other Management Consulting Services	\$133,425.63	0.03%	99.45%
561422	Telemarketing Bureaus and Other Contact Centers	\$129,665.88	0.03%	99.48%
334290	Other Communications Equipment Manufacturing	\$125,216.81	0.03%	99.50%
484210	Used Household and Office Goods Moving	\$121,903.86	0.03%	99.53%
423110	Automobile and Other Motor Vehicle Merchant Wholesalers	\$120,252.26	0.03%	99.56%
561450	Credit Bureaus	\$119,995.00	0.03%	99.58%
561710	Exterminating and Pest Control Services	\$115,662.28	0.03%	99.61%
493110	General Warehousing and Storage	\$113,360.13	0.02%	99.63%
334118	Computer Terminal and Other Computer Peripheral Equipment Manufacturing	\$110,631.11	0.02%	99.66%
238210	Electrical Contractors and Other Wiring Installation Contractors	\$98,192.51	0.02%	99.68%
491110	Postal Service	\$93,631.42	0.02%	99.70%
811122	Automotive Glass Replacement Shops	\$88,511.62	0.02%	99.72%
562219	Other Nonhazardous Waste Treatment and Disposal	\$88,259.50	0.02%	99.74%
811118	Other Automotive Mechanical and Electrical Repair and Maintenance	\$88,217.32	0.02%	99.76%
811192	Car Washes	\$85,935.42	0.02%	99.77%
561499	All Other Business Support Services	\$79,789.50	0.02%	99.79%

NAICS CODE	NAICS CODE DESC	PRIME ONLY & SUB ONLY PAYMENTS	PERCENT	CUMULATIVE PERCENT
333249	Other Industrial Machinery Manufacturing	\$79,326.00	0.02%	99.81%
423820	Farm and Garden Machinery and Equipment Merchant Wholesalers	\$78,256.04	0.02%	99.83%
333912	Air and Gas Compressor Manufacturing	\$68,736.85	0.01%	99.84%
424110	Printing and Writing Paper Merchant Wholesalers	\$63,251.32	0.01%	99.85%
811412	Appliance Repair and Maintenance	\$56,215.53	0.01%	99.87%
332999	All Other Miscellaneous Fabricated Metal Product Manufacturing	\$55,467.41	0.01%	99.88%
333318	Other Commercial and Service Industry Machinery Manufacturing	\$51,820.00	0.01%	99.89%
332994	Small Arms, Ordnance, and Ordnance Accessories Manufacturing	\$48,958.57	0.01%	99.90%
562991	Septic Tank and Related Services	\$44,945.62	0.01%	99.91%
722320	Caterers	\$44,287.00	0.01%	99.92%
492110	Couriers and Express Delivery Services	\$41,345.89	0.01%	99.93%
238390	Other Building Finishing Contractors	\$40,400.00	0.01%	99.94%
488991	Packing and Crating	\$36,771.29	0.01%	99.95%
423710	Hardware Merchant Wholesalers	\$36,081.21	0.01%	99.95%
115112	Soil Preparation, Planting, and Cultivating	\$21,086.00	0.00%	99.96%
112511	Finfish Farming and Fish Hatcheries	\$18,500.00	0.00%	99.96%
325211	Plastics Material and Resin Manufacturing	\$17,598.00	0.00%	99.97%
423510	Metal Service Centers and Other Metal Merchant Wholesalers	\$17,301.63	0.00%	99.97%
333120	Construction Machinery Manufacturing	\$17,015.90	0.00%	99.97%
561613	Armored Car Services	\$16,800.52	0.00%	99.98%
811211	Consumer Electronics Repair and Maintenance	\$16,305.50	0.00%	99.98%
485510	Charter Bus Industry	\$15,238.95	0.00%	99.98%
519130	Internet Publishing and Broadcasting and Web Search Portals	\$13,800.00	0.00%	99.99%
424920	Book, Periodical, and Newspaper Merchant Wholesalers	\$10,662.00	0.00%	99.99%
322110	Pulp Mills	\$10,390.00	0.00%	99.99%
541611	Administrative Management and General Management Consulting Services	\$8,720.00	0.00%	99.99%
331511	Iron Foundries	\$8,010.00	0.00%	99.99%
711510	Independent Artists, Writers, and Performers	\$6,100.00	0.00%	100.00%

NAICS CODE	NAICS CODE DESC	PRIME ONLY & SUB ONLY PAYMENTS	PERCENT	CUMULATIVE PERCENT
333413	Industrial and Commercial Fan and Blower and Air Purification Equipment Manufacturing	\$5,214.27	0.00%	100.00%
561492	Court Reporting and Stenotype Services	\$4,636.20	0.00%	100.00%
812320	Drycleaning and Laundry Services (except Coin-Operated)	\$2,979.02	0.00%	100.00%
335312	Motor and Generator Manufacturing	\$2,448.00	0.00%	100.00%
541380	Testing Laboratories	\$2,276.00	0.00%	100.00%
562119	Other Waste Collection	\$2,079.00	0.00%	100.00%
	TOTAL	\$462,014,063.11		

Appendix C

C. Detailed Utilization, Availability, and Disparity Analyses

TABLE C-1.
DETAILED UTILIZATION, AVAILABILITY, AND DISPARITY ANALYSES
WSSC WATER MARKETPLACE
CONSTRUCTION
AFRICAN AMERICAN FIRMS

NAICS-4	NAICS-4 DESC	AFRICAN AMERICAN			
		Utilization	Availability	Disparity	Significance
2362	Nonresidential building construction	4.03%	13.46%	29.94%	***
2371	Utility system construction	0.15%	7.20%	2.02%	***
2373	Highway, street, and bridge construction	1.34%	13.82%	9.72%	***
2379	Other heavy construction	0.00%	8.12%	0.00%	***
2381	Building foundation and exterior contractors	1.00%	17.09%	5.86%	***
2382	Building equipment contractors	13.31%	10.86%		
2383	Building finishing contractors	0.00%	3.63%	0.00%	***
2389	Other specialty trade contractors	24.51%	9.40%		
3219	Other wood product manufacturing	0.00%	0.00%		
3241	Petroleum and coal products manufacturing	0.00%	2.63%	0.00%	**
3272	Glass and glass product manufacturing	0.00%	0.00%		
3273	Cement and concrete product manufacturing	0.00%	1.47%	0.00%	
3312	Steel product mfg. from purchased steel	0.00%	0.00%		
3323	Architectural and structural metals mfg.	0.00%	0.00%		
3329	Other fabricated metal product manufacturing	0.00%	14.29%	0.00%	***
3372	Office furniture and fixtures manufacturing	0.00%	0.00%		
3379	Other furniture related product manufacturing	0.00%	2.08%	0.00%	*
3399	Other miscellaneous manufacturing	0.00%	17.14%	0.00%	***
4233	Lumber and const. supply merchant wholesalers	12.57%	3.38%		
4234	Commercial equip. merchant wholesalers	0.00%	2.81%	0.00%	**
4236	Appliance and electric goods merchant whls.	99.19%	9.09%		
4237	Hardware and plumbing merchant wholesalers	23.20%	6.25%		
4238	Machinery and supply merchant wholesalers	1.66%	36.96%	4.50%	***
4249	Misc. nondurable goods merchant wholesalers	100.00%	0.00%		
4421	Furniture stores	0.00%	7.14%	0.00%	***
4441	Building material and supplies dealers	0.00%	0.66%	0.00%	
4442	Lawn and garden equipment and supplies stores	0.00%	0.00%		
4543	Direct selling establishments	95.44%	0.51%		
4842	Specialized freight trucking	55.86%	13.36%		
5242	Insurance agencies and brokerages	0.00%	9.24%	0.00%	***
5324	Machinery and equipment rental and leasing	28.48%	18.28%		
5413	Architectural and engineering services	11.24%	14.29%	78.63%	
5414	Specialized design services	0.00%	9.35%	0.00%	***

NAICS-4	NAICS-4 DESC	AFRICAN AMERICAN			
		Utilization	Availability	Disparity	Significance
5415	Computer systems design and related services	0.00%	15.37%	0.00%	***
5416	Management and technical consulting services	35.73%	22.91%		
5419	Other professional and technical services	96.10%	29.66%		
5613	Employment services	0.00%	18.51%	0.00%	***
5616	Investigation and security services	100.00%	19.45%		
5617	Services to buildings and dwellings	3.18%	20.31%	15.66%	***
5619	Other support services	3.93%	34.66%	11.34%	***
5621	Waste collection	99.76%	2.11%		
5622	Waste treatment and disposal	0.00%	24.80%	0.00%	***
5629	Remediation and other waste services	9.62%	12.13%	79.27%	

Note: Disparity index values may vary slightly from calculations of depicted figures due to rounding of presented levels of utilization and availability. “*” indicates an adverse disparity that is statistically significant at the 15% level or better (85% confidence). “***” indicates the disparity is significant at a 10% level or better (90% confidence). “****” indicates significance at a 5% level or better (95% confidence).

TABLE C-2.
DETAILED UTILIZATION, AVAILABILITY, AND DISPARITY ANALYSES
WSSC WATER MARKETPLACE
CONSTRUCTION
ASIAN AMERICAN FIRMS

NAICS-4	NAICS-4 DESC	ASIAN AMERICAN			
		Utilization	Availability	Disparity	Significance
2362	Nonresidential building construction	19.04%	6.16%		
2371	Utility system construction	9.65%	8.27%		
2373	Highway, street, and bridge construction	0.00%	4.41%	0.00%	***
2379	Other heavy construction	0.00%	14.76%	0.00%	***
2381	Building foundation and exterior contractors	0.85%	6.96%	12.20%	***
2382	Building equipment contractors	0.59%	2.17%	27.10%	
2383	Building finishing contractors	0.00%	2.92%	0.00%	**
2389	Other specialty trade contractors	2.12%	1.68%		
3219	Other wood product manufacturing	0.00%	0.00%		
3241	Petroleum and coal products manufacturing	0.00%	0.00%		
3272	Glass and glass product manufacturing	0.00%	0.00%		
3273	Cement and concrete product manufacturing	0.00%	0.00%		
3312	Steel product mfg. from purchased steel	100.00%	0.00%		
3323	Architectural and structural metals mfg.	0.00%	0.00%		
3329	Other fabricated metal product manufacturing	0.00%	5.17%	0.00%	***
3372	Office furniture and fixtures manufacturing	0.00%	0.00%		
3379	Other furniture related product manufacturing	0.00%	0.00%		
3399	Other miscellaneous manufacturing	0.00%	0.38%	0.00%	
4233	Lumber and const. supply merchant wholesalers	8.73%	5.80%		
4234	Commercial equip. merchant wholesalers	0.00%	9.87%	0.00%	***
4236	Appliance and electric goods merchant whls.	0.00%	8.67%	0.00%	***

NAICS-4	NAICS-4 DESC	ASIAN AMERICAN			
		Utilization	Availability	Disparity	Significance
4237	Hardware and plumbing merchant wholesalers	42.41%	0.18%		
4238	Machinery and supply merchant wholesalers	0.00%	14.54%	0.00%	***
4249	Misc. nondurable goods merchant wholesalers	0.00%	0.00%		
4421	Furniture stores	0.00%	0.10%	0.00%	
4441	Building material and supplies dealers	0.00%	0.00%		
4442	Lawn and garden equipment and supplies stores	0.00%	0.00%		
4543	Direct selling establishments	0.74%	0.00%		
4842	Specialized freight trucking	2.83%	0.33%		
5242	Insurance agencies and brokerages	0.00%	0.02%	0.00%	
5324	Machinery and equipment rental and leasing	0.31%	0.00%		
5413	Architectural and engineering services	17.29%	18.80%	91.97%	
5414	Specialized design services	0.00%	0.36%	0.00%	
5415	Computer systems design and related services	0.00%	14.67%	0.00%	***
5416	Management and technical consulting services	0.00%	4.31%	0.00%	***
5419	Other professional and technical services	0.00%	9.97%	0.00%	***
5613	Employment services	0.00%	7.23%	0.00%	***
5616	Investigation and security services	0.00%	2.59%	0.00%	**
5617	Services to buildings and dwellings	0.00%	1.76%	0.00%	*
5619	Other support services	0.00%	7.20%	0.00%	***
5621	Waste collection	0.00%	0.70%	0.00%	
5622	Waste treatment and disposal	0.00%	6.17%	0.00%	***
5629	Remediation and other waste services	0.00%	0.58%	0.00%	

Note: Disparity index values may vary slightly from calculations of depicted figures due to rounding of presented levels of utilization and availability. “*” indicates an adverse disparity that is statistically significant at the 15% level or better (85% confidence). “**” indicates the disparity is significant at a 10% level or better (90% confidence). “***” indicates significance at a 5% level or better (95% confidence).

TABLE C-3.
DETAILED UTILIZATION, AVAILABILITY, AND DISPARITY ANALYSES
WSSC WATER MARKETPLACE
CONSTRUCTION
HISPANIC AMERICAN FIRMS

NAICS-4	NAICS-4 DESC	HISPANIC AMERICAN			
		Utilization	Availability	Disparity	Significance
2362	Nonresidential building construction	20.50%	5.39%		
2371	Utility system construction	13.75%	11.14%		
2373	Highway, street, and bridge construction	0.23%	9.18%	2.51%	***
2379	Other heavy construction	1.94%	0.00%		
2381	Building foundation and exterior contractors	4.98%	29.04%	17.15%	***
2382	Building equipment contractors	3.69%	4.91%	75.02%	
2383	Building finishing contractors	21.96%	15.02%		
2389	Other specialty trade contractors	22.27%	13.56%		
3219	Other wood product manufacturing	0.00%	0.00%		

NAICS-4	NAICS-4 DESC	HISPANIC AMERICAN			
		Utilization	Availability	Disparity	Significance
3241	Petroleum and coal products manufacturing	19.55%	2.63%		
3272	Glass and glass product manufacturing	0.00%	0.00%		
3273	Cement and concrete product manufacturing	0.00%	0.00%		
3312	Steel product mfg. from purchased steel	0.00%	0.00%		
3323	Architectural and structural metals mfg.	0.00%	0.00%		
3329	Other fabricated metal product manufacturing	0.00%	4.63%	0.00%	***
3372	Office furniture and fixtures manufacturing	0.00%	0.00%		
3379	Other furniture related product manufacturing	0.00%	0.00%		
3399	Other miscellaneous manufacturing	0.00%	0.00%		
4233	Lumber and const. supply merchant wholesalers	16.49%	8.72%		
4234	Commercial equip. merchant wholesalers	0.00%	4.19%	0.00%	***
4236	Appliance and electric goods merchant whls.	0.00%	0.24%	0.00%	
4237	Hardware and plumbing merchant wholesalers	0.00%	0.37%	0.00%	
4238	Machinery and supply merchant wholesalers	0.89%	13.77%	6.47%	***
4249	Misc. nondurable goods merchant wholesalers	0.00%	0.00%		
4421	Furniture stores	0.00%	7.14%	0.00%	***
4441	Building material and supplies dealers	0.00%	25.00%	0.00%	***
4442	Lawn and garden equipment and supplies stores	0.00%	0.39%	0.00%	
4543	Direct selling establishments	0.00%	12.50%	0.00%	***
4842	Specialized freight trucking	39.02%	8.68%		
5242	Insurance agencies and brokerages	0.00%	4.58%	0.00%	***
5324	Machinery and equipment rental and leasing	7.98%	0.00%		
5413	Architectural and engineering services	15.92%	7.45%		
5414	Specialized design services	0.00%	0.21%	0.00%	
5415	Computer systems design and related services	0.00%	4.37%	0.00%	***
5416	Management and technical consulting services	0.00%	4.67%	0.00%	***
5419	Other professional and technical services	0.00%	4.05%	0.00%	***
5613	Employment services	0.00%	2.60%	0.00%	**
5616	Investigation and security services	0.00%	2.59%	0.00%	**
5617	Services to buildings and dwellings	0.57%	19.18%	2.99%	***
5619	Other support services	0.00%	7.13%	0.00%	***
5621	Waste collection	0.24%	1.41%	17.29%	
5622	Waste treatment and disposal	0.00%	0.00%		
5629	Remediation and other waste services	6.82%	11.30%	60.40%	*

Note: Disparity index values may vary slightly from calculations of depicted figures due to rounding of presented levels of utilization and availability. “*” indicates an adverse disparity that is statistically significant at the 15% level or better (85% confidence). “**” indicates the disparity is significant at a 10% level or better (90% confidence). “***” indicates significance at a 5% level or better (95% confidence).

TABLE C-4.
DETAILED UTILIZATION, AVAILABILITY, AND DISPARITY ANALYSES
WSSC WATER MARKETPLACE
CONSTRUCTION
NATIVE AMERICAN FIRMS

NAICS-4	NAICS-4 DESC	NATIVE AMERICAN			
		Utilization	Availability	Disparity	Significance
2362	Nonresidential building construction	0.00%	2.44%	0.00%	**
2371	Utility system construction	0.00%	0.00%		
2373	Highway, street, and bridge construction	0.00%	0.00%		
2379	Other heavy construction	0.00%	0.55%	0.00%	
2381	Building foundation and exterior contractors	0.24%	0.77%	31.77%	
2382	Building equipment contractors	0.60%	0.61%	98.37%	
2383	Building finishing contractors	0.00%	1.40%	0.00%	
2389	Other specialty trade contractors	0.00%	1.78%	0.00%	*
3219	Other wood product manufacturing	0.00%	0.00%		
3241	Petroleum and coal products manufacturing	0.00%	0.00%		
3272	Glass and glass product manufacturing	0.00%	0.00%		
3273	Cement and concrete product manufacturing	0.00%	0.00%		
3312	Steel product mfg. from purchased steel	0.00%	0.00%		
3323	Architectural and structural metals mfg.	0.00%	0.00%		
3329	Other fabricated metal product manufacturing	0.00%	0.00%		
3372	Office furniture and fixtures manufacturing	0.00%	0.00%		
3379	Other furniture related product manufacturing	0.00%	0.00%		
3399	Other miscellaneous manufacturing	0.00%	0.19%	0.00%	
4233	Lumber and const. supply merchant wholesalers	0.00%	0.00%		
4234	Commercial equip. merchant wholesalers	0.00%	0.06%	0.00%	
4236	Appliance and electric goods merchant whls.	0.00%	0.00%		
4237	Hardware and plumbing merchant wholesalers	0.00%	0.00%		
4238	Machinery and supply merchant wholesalers	0.00%	3.62%	0.00%	***
4249	Misc. nondurable goods merchant wholesalers	0.00%	0.00%		
4421	Furniture stores	0.00%	0.00%		
4441	Building material and supplies dealers	0.00%	0.00%		
4442	Lawn and garden equipment and supplies stores	0.00%	0.00%		
4543	Direct selling establishments	0.00%	0.00%		
4842	Specialized freight trucking	0.00%	0.00%		
5242	Insurance agencies and brokerages	0.00%	4.55%	0.00%	***
5324	Machinery and equipment rental and leasing	0.00%	0.00%		
5413	Architectural and engineering services	0.08%	0.67%	11.90%	
5414	Specialized design services	0.00%	0.00%		
5415	Computer systems design and related services	0.00%	0.59%	0.00%	
5416	Management and technical consulting services	0.00%	0.06%	0.00%	
5419	Other professional and technical services	0.00%	0.01%	0.00%	

NAICS-4	NAICS-4 DESC	NATIVE AMERICAN			
		Utilization	Availability	Disparity	Significance
5613	Employment services	0.00%	2.30%	0.00%	**
5616	Investigation and security services	0.00%	2.52%	0.00%	**
5617	Services to buildings and dwellings	0.00%	0.84%	0.00%	
5619	Other support services	0.00%	0.01%	0.00%	
5621	Waste collection	0.00%	0.00%		
5622	Waste treatment and disposal	0.00%	0.00%		
5629	Remediation and other waste services	0.00%	0.29%	0.00%	

Note: Disparity index values may vary slightly from calculations of depicted figures due to rounding of presented levels of utilization and availability. “*” indicates an adverse disparity that is statistically significant at the 15% level or better (85% confidence). “**” indicates the disparity is significant at a 10% level or better (90% confidence). “***” indicates significance at a 5% level or better (95% confidence).

TABLE C-5.
DETAILED UTILIZATION, AVAILABILITY, AND DISPARITY ANALYSES
WSSC WATER MARKETPLACE
CONSTRUCTION
MBE FIRMS

NAICS-4	NAICS-4 DESC	MBE			
		Utilization	Availability	Disparity	Significance
2362	Nonresidential building construction	43.57%	27.45%		
2371	Utility system construction	23.54%	26.61%	88.48%	
2373	Highway, street, and bridge construction	1.57%	27.41%	5.74%	***
2379	Other heavy construction	1.94%	23.43%	8.27%	***
2381	Building foundation and exterior contractors	7.07%	53.86%	13.14%	***
2382	Building equipment contractors	18.18%	18.55%	98.02%	
2383	Building finishing contractors	21.96%	22.97%	95.63%	
2389	Other specialty trade contractors	48.90%	26.42%		
3219	Other wood product manufacturing	0.00%	0.00%		
3241	Petroleum and coal products manufacturing	19.55%	5.26%		
3272	Glass and glass product manufacturing	0.00%	0.00%		
3273	Cement and concrete product manufacturing	0.00%	1.47%	0.00%	
3312	Steel product mfg. from purchased steel	100.00%	0.00%		
3323	Architectural and structural metals mfg.	0.00%	0.00%		
3329	Other fabricated metal product manufacturing	0.00%	24.09%	0.00%	***
3372	Office furniture and fixtures manufacturing	0.00%	0.00%		
3379	Other furniture related product manufacturing	0.00%	2.08%	0.00%	*
3399	Other miscellaneous manufacturing	0.00%	17.70%	0.00%	***
4233	Lumber and const. supply merchant wholesalers	37.78%	17.91%		
4234	Commercial equip. merchant wholesalers	0.00%	16.93%	0.00%	***
4236	Appliance and electric goods merchant whls.	99.19%	18.00%		
4237	Hardware and plumbing merchant wholesalers	65.61%	6.80%		
4238	Machinery and supply merchant wholesalers	2.55%	68.88%	3.71%	***
4249	Misc. nondurable goods merchant wholesalers	100.00%	0.00%		
4421	Furniture stores	0.00%	14.38%	0.00%	***
4441	Building material and supplies dealers	0.00%	25.66%	0.00%	***

NAICS-4	NAICS-4 DESC	MBE			
		Utilization	Availability	Disparity	Significance
4442	Lawn and garden equipment and supplies stores	0.00%	0.39%	0.00%	
4543	Direct selling establishments	96.18%	13.01%		
4842	Specialized freight trucking	97.72%	22.38%		
5242	Insurance agencies and brokerages	0.00%	18.38%	0.00%	***
5324	Machinery and equipment rental and leasing	36.78%	18.28%		
5413	Architectural and engineering services	44.52%	41.21%		
5414	Specialized design services	0.00%	9.92%	0.00%	***
5415	Computer systems design and related services	0.00%	35.00%	0.00%	***
5416	Management and technical consulting services	35.73%	31.95%		
5419	Other professional and technical services	96.10%	43.69%		
5613	Employment services	0.00%	30.64%	0.00%	***
5616	Investigation and security services	100.00%	27.15%		
5617	Services to buildings and dwellings	3.75%	42.08%	8.92%	***
5619	Other support services	3.93%	49.00%	8.02%	***
5621	Waste collection	100.00%	4.23%		
5622	Waste treatment and disposal	0.00%	30.98%	0.00%	***
5629	Remediation and other waste services	16.44%	24.31%	67.64%	***

Note: Disparity index values may vary slightly from calculations of depicted figures due to rounding of presented levels of utilization and availability. “*” indicates an adverse disparity that is statistically significant at the 15% level or better (85% confidence). “***” indicates the disparity is significant at a 10% level or better (90% confidence). “****” indicates significance at a 5% level or better (95% confidence).

TABLE C-6.
DETAILED UTILIZATION, AVAILABILITY, AND DISPARITY ANALYSES
WSSC WATER MARKETPLACE
CONSTRUCTION
NONMINORITY FEMALE FIRMS

NAICS-4	NAICS-4 DESC	NONMINORITY FEMALE			
		Utilization	Availability	Disparity	Significance
2362	Nonresidential building construction	0.00%	11.42%	0.00%	***
2371	Utility system construction	6.32%	13.94%	45.34%	***
2373	Highway, street, and bridge construction	0.00%	9.14%	0.00%	***
2379	Other heavy construction	61.27%	21.95%		
2381	Building foundation and exterior contractors	26.32%	18.51%		
2382	Building equipment contractors	0.79%	12.25%		
2383	Building finishing contractors	0.00%	12.78%	0.00%	***
2389	Other specialty trade contractors	23.70%	12.13%		
3219	Other wood product manufacturing	0.00%	0.00%		
3241	Petroleum and coal products manufacturing	0.00%	25.00%	0.00%	***
3272	Glass and glass product manufacturing	0.00%	0.00%		
3273	Cement and concrete product manufacturing	82.44%	1.47%		
3312	Steel product mfg. from purchased steel	0.00%	0.00%		
3323	Architectural and structural metals mfg.	0.00%	0.00%		
3329	Other fabricated metal product manufacturing	100.00%	33.92%		
3372	Office furniture and fixtures manufacturing	15.10%	0.00%		

NAICS-4	NAICS-4 DESC	NONMINORITY FEMALE			
		Utilization	Availability	Disparity	Significance
3379	Other furniture related product manufacturing	0.00%	2.08%	0.00%	*
3399	Other miscellaneous manufacturing	23.24%	17.07%		
4233	Lumber and const. supply merchant wholesalers	57.17%	11.52%		
4234	Commercial equip. merchant wholesalers	0.00%	13.90%	0.00%	***
4236	Appliance and electric goods merchant whls.	0.00%	9.28%	0.00%	***
4237	Hardware and plumbing merchant wholesalers	26.72%	16.79%		
4238	Machinery and supply merchant wholesalers	12.82%	16.79%	76.34%	
4249	Misc. nondurable goods merchant wholesalers	0.00%	33.33%	0.00%	***
4421	Furniture stores	0.00%	28.43%	0.00%	***
4441	Building material and supplies dealers	0.00%	24.92%	0.00%	***
4442	Lawn and garden equipment and supplies stores	0.00%	99.42%	0.00%	***
4543	Direct selling establishments	0.00%	37.31%	0.00%	***
4842	Specialized freight trucking	1.45%	13.26%	10.91%	***
5242	Insurance agencies and brokerages	0.00%	9.12%	0.00%	***
5324	Machinery and equipment rental and leasing	36.43%	27.27%		
5413	Architectural and engineering services	2.13%	14.76%	14.44%	***
5414	Specialized design services	0.00%	35.08%	0.00%	***
5415	Computer systems design and related services	0.00%	10.95%	0.00%	***
5416	Management and technical consulting services	0.00%	16.74%	0.00%	***
5419	Other professional and technical services	0.00%	19.84%	0.00%	***
5613	Employment services	0.00%	14.39%	0.00%	***
5616	Investigation and security services	0.00%	7.46%	0.00%	***
5617	Services to buildings and dwellings	60.68%	14.19%		
5619	Other support services	89.16%	18.25%		
5621	Waste collection	0.00%	1.41%	0.00%	
5622	Waste treatment and disposal	93.19%	29.54%		
5629	Remediation and other waste services	8.97%	11.30%	79.38%	

Note: Disparity index values may vary slightly from calculations of depicted figures due to rounding of presented levels of utilization and availability. “*” indicates an adverse disparity that is statistically significant at the 15% level or better (85% confidence). “***” indicates the disparity is significant at a 10% level or better (90% confidence). “****” indicates significance at a 5% level or better (95% confidence).

TABLE C-7.
DETAILED UTILIZATION, AVAILABILITY, AND DISPARITY ANALYSES
WSSC WATER MARKETPLACE
CONSTRUCTION
M/WBE FIRMS

NAICS-4	NAICS-4 DESC	M/WBE			
		Utilization	Availability	Disparity	Significance
2362	Nonresidential building construction	43.57%	38.87%		
2371	Utility system construction	29.86%	40.55%	73.65%	***
2373	Highway, street, and bridge construction	1.57%	36.55%	4.31%	***
2379	Other heavy construction	63.20%	45.38%		
2381	Building foundation and exterior contractors	33.40%	72.37%	46.15%	***
2382	Building equipment contractors	18.97%	30.79%	61.60%	***

NAICS-4	NAICS-4 DESC	M/WBE			
		Utilization	Availability	Disparity	Significance
2383	Building finishing contractors	21.96%	35.75%	61.43%	***
2389	Other specialty trade contractors	72.59%	38.55%		
3219	Other wood product manufacturing	0.00%	0.00%		
3241	Petroleum and coal products manufacturing	19.55%	30.26%	64.61%	***
3272	Glass and glass product manufacturing	0.00%	0.00%		
3273	Cement and concrete product manufacturing	82.44%	2.94%		
3312	Steel product mfg. from purchased steel	100.00%	0.00%		
3323	Architectural and structural metals mfg.	0.00%	0.00%		
3329	Other fabricated metal product manufacturing	100.00%	58.02%		
3372	Office furniture and fixtures manufacturing	15.10%	0.00%		
3379	Other furniture related product manufacturing	0.00%	4.17%	0.00%	***
3399	Other miscellaneous manufacturing	23.24%	34.78%	66.82%	***
4233	Lumber and const. supply merchant wholesalers	94.95%	29.43%		
4234	Commercial equip. merchant wholesalers	0.00%	30.83%	0.00%	***
4236	Appliance and electric goods merchant whls.	99.19%	27.27%		
4237	Hardware and plumbing merchant wholesalers	92.33%	23.59%		
4238	Machinery and supply merchant wholesalers	15.37%	85.68%	17.94%	***
4249	Misc. nondurable goods merchant wholesalers	100.00%	33.33%		
4421	Furniture stores	0.00%	42.82%	0.00%	***
4441	Building material and supplies dealers	0.00%	50.58%	0.00%	***
4442	Lawn and garden equipment and supplies stores	0.00%	99.81%	0.00%	***
4543	Direct selling establishments	96.18%	50.32%		
4842	Specialized freight trucking	99.16%	35.64%		
5242	Insurance agencies and brokerages	0.00%	27.51%	0.00%	***
5324	Machinery and equipment rental and leasing	73.21%	45.55%		
5413	Architectural and engineering services	46.65%	55.97%	83.36%	***
5414	Specialized design services	0.00%	45.00%	0.00%	***
5415	Computer systems design and related services	0.00%	45.95%	0.00%	***
5416	Management and technical consulting services	35.73%	48.69%	73.38%	***
5419	Other professional and technical services	96.10%	63.53%		
5613	Employment services	0.00%	45.03%	0.00%	***
5616	Investigation and security services	100.00%	34.61%		
5617	Services to buildings and dwellings	64.44%	56.27%		
5619	Other support services	93.09%	67.25%		
5621	Waste collection	100.00%	5.63%		
5622	Waste treatment and disposal	93.19%	60.52%		
5629	Remediation and other waste services	25.41%	35.61%	71.37%	***

Note: Disparity index values may vary slightly from calculations of depicted figures due to rounding of presented levels of utilization and availability. “*” indicates an adverse disparity that is statistically significant at the 15% level or better (85% confidence). “***” indicates the disparity is significant at a 10% level or better (90% confidence). “****” indicates significance at a 5% level or better (95% confidence).

TABLE C-8.
DETAILED UTILIZATION, AVAILABILITY, AND DISPARITY ANALYSES
WSSC WATER MARKETPLACE
ARCHITECTURE & ENGINEERING
AFRICAN AMERICAN FIRMS

NAICS-4	NAICS-4 DESC	AFRICAN AMERICAN			
		Utilization	Availability	Disparity	Significance
2371	Utility system construction	33.96%	7.20%		
2379	Other heavy construction	0.00%	8.12%	0.00%	***
2381	Building foundation and exterior contractors	100.00%	17.09%		
4233	Lumber and const. supply merchant wholesalers	0.00%	3.38%	0.00%	**
4236	Appliance and electric goods merchant whls.	0.00%	9.09%	0.00%	***
5324	Machinery and equipment rental and leasing	0.00%	18.28%	0.00%	***
5413	Architectural and engineering services	6.26%	14.29%	43.83%	***
5415	Computer systems design and related services	53.72%	15.37%		
5416	Management and technical consulting services	53.66%	22.91%		
5418	Advertising, PR, and related services	49.25%	9.54%		
5613	Employment services	52.60%	18.51%		
5619	Other support services	6.48%	34.66%	18.69%	***
5621	Waste collection	0.00%	2.11%	0.00%	
5622	Waste treatment and disposal	0.00%	24.80%	0.00%	***
5629	Remediation and other waste services	80.54%	12.13%		

Note: Disparity index values may vary slightly from calculations of depicted figures due to rounding of presented levels of utilization and availability. “**” indicates an adverse disparity that is statistically significant at the 15% level or better (85% confidence). “***” indicates the disparity is significant at a 10% level or better (90% confidence). “****” indicates significance at a 5% level or better (95% confidence).

TABLE C-9.
DETAILED UTILIZATION, AVAILABILITY, AND DISPARITY ANALYSES
WSSC WATER MARKETPLACE
ARCHITECTURE & ENGINEERING
ASIAN AMERICAN FIRMS

NAICS-4	NAICS-4 DESC	ASIAN AMERICAN			
		Utilization	Availability	Disparity	Significance
2371	Utility system construction	30.74%	8.27%		
2379	Other heavy construction	0.00%	14.76%	0.00%	***
2381	Building foundation and exterior contractors	0.00%	6.96%	0.00%	***
4233	Lumber and const. supply merchant wholesalers	0.00%	5.80%	0.00%	***
4236	Appliance and electric goods merchant whls.	100.00%	8.67%		
5324	Machinery and equipment rental and leasing	0.00%	0.00%		
5413	Architectural and engineering services	14.31%	18.80%	76.14%	
5415	Computer systems design and related services	0.20%	14.67%	1.38%	***

NAICS-4	NAICS-4 DESC	ASIAN AMERICAN			
5416	Management and technical consulting services	9.88%	4.31%		
5418	Advertising, PR, and related services	19.92%	4.50%		
5613	Employment services	47.40%	7.23%		
5619	Other support services	0.00%	7.20%	0.00%	***
5621	Waste collection	100.00%	0.70%		
5622	Waste treatment and disposal	100.00%	6.17%		
5629	Remediation and other waste services	0.00%	0.58%	0.00%	

Note: Disparity index values may vary slightly from calculations of depicted figures due to rounding of presented levels of utilization and availability. “*” indicates an adverse disparity that is statistically significant at the 15% level or better (85% confidence). “***” indicates the disparity is significant at a 10% level or better (90% confidence). “****” indicates significance at a 5% level or better (95% confidence).

TABLE C-10.
DETAILED UTILIZATION, AVAILABILITY, AND DISPARITY ANALYSES
WSSC WATER MARKETPLACE
ARCHITECTURE & ENGINEERING
HISPANIC AMERICAN FIRMS

NAICS-4	NAICS-4 DESC	HISPANIC AMERICAN			
		Utilization	Availability	Disparity	Significance
2371	Utility system construction	0.00%	11.14%	0.00%	***
2379	Other heavy construction	0.00%	0.00%		
2381	Building foundation and exterior contractors	0.00%	29.04%	0.00%	***
4233	Lumber and const. supply merchant wholesalers	0.00%	8.72%	0.00%	***
4236	Appliance and electric goods merchant whls.	0.00%	0.24%	0.00%	
5324	Machinery and equipment rental and leasing	0.00%	0.00%		
5413	Architectural and engineering services	4.39%	7.45%	58.91%	
5415	Computer systems design and related services	0.00%	4.37%	0.00%	***
5416	Management and technical consulting services	1.53%	4.67%	32.78%	*
5418	Advertising, PR, and related services	0.00%	0.23%	0.00%	
5613	Employment services	0.00%	2.60%	0.00%	*
5619	Other support services	0.00%	7.13%	0.00%	***
5621	Waste collection	0.00%	1.41%	0.00%	
5622	Waste treatment and disposal	0.00%	0.00%		
5629	Remediation and other waste services	0.00%	11.30%	0.00%	***

Note: Disparity index values may vary slightly from calculations of depicted figures due to rounding of presented levels of utilization and availability. “*” indicates an adverse disparity that is statistically significant at the 15% level or better (85% confidence). “***” indicates the disparity is significant at a 10% level or better (90% confidence). “****” indicates significance at a 5% level or better (95% confidence).

TABLE C-11.
DETAILED UTILIZATION, AVAILABILITY, AND DISPARITY ANALYSES
WSSC WATER MARKETPLACE
ARCHITECTURE & ENGINEERING
NATIVE AMERICAN FIRMS

NAICS-4	NAICS-4 DESC	NATIVE AMERICAN			
		Utilization	Availability	Disparity	Significance
2371	Utility system construction	0.00%	0.00%		
2379	Other heavy construction	0.00%	0.55%	0.00%	
2381	Building foundation and exterior contractors	0.00%	0.77%	0.00%	
4233	Lumber and const. supply merchant wholesalers	0.00%	0.00%		
4236	Appliance and electric goods merchant whls.	0.00%	0.00%		
5324	Machinery and equipment rental and leasing	0.00%	0.00%		
5413	Architectural and engineering services	0.00%	0.67%	0.00%	
5415	Computer systems design and related services	0.00%	0.59%	0.00%	
5416	Management and technical consulting services	0.00%	0.06%	0.00%	
5418	Advertising, PR, and related services	0.00%	0.04%	0.00%	
5613	Employment services	0.00%	2.30%	0.00%	*
5619	Other support services	0.00%	0.01%	0.00%	
5621	Waste collection	0.00%	0.00%		
5622	Waste treatment and disposal	0.00%	0.00%		
5629	Remediation and other waste services	0.00%	0.29%	0.00%	

Note: Disparity index values may vary slightly from calculations of depicted figures due to rounding of presented levels of utilization and availability. “*” indicates an adverse disparity that is statistically significant at the 15% level or better (85% confidence). “**” indicates the disparity is significant at a 10% level or better (90% confidence). “***” indicates significance at a 5% level or better (95% confidence).

TABLE C-12.
DETAILED UTILIZATION, AVAILABILITY, AND DISPARITY ANALYSES
WSSC WATER MARKETPLACE
ARCHITECTURE & ENGINEERING
MBE FIRMS

NAICS-4	NAICS-4 DESC	MBE			
		Utilization	Availability	Disparity	Significance
2371	Utility system construction	64.70%	26.61%		
2379	Other heavy construction	0.00%	23.43%	0.00%	***
2381	Building foundation and exterior contractors	100.00%	53.86%		
4233	Lumber and const. supply merchant wholesalers	0.00%	17.91%	0.00%	***
4236	Appliance and electric goods merchant whls.	100.00%	18.00%		
5324	Machinery and equipment rental and leasing	0.00%	18.28%	0.00%	***
5413	Architectural and engineering services	24.96%	41.21%	60.58%	***
5415	Computer systems design and related services	53.92%	35.00%		
5416	Management and technical consulting services	65.07%	31.95%		
5418	Advertising, PR, and related services	69.17%	14.32%		
5613	Employment services	100.00%	30.64%		
5619	Other support services	6.48%	49.00%	13.22%	***

NAICS-4	NAICS-4 DESC	MBE			
		Utilization	Availability	Disparity	Significance
5621	Waste collection	100.00%	4.23%		
5622	Waste treatment and disposal	100.00%	30.98%		
5629	Remediation and other waste services	80.54%	24.31%		

Note: Disparity index values may vary slightly from calculations of depicted figures due to rounding of presented levels of utilization and availability. “*” indicates an adverse disparity that is statistically significant at the 15% level or better (85% confidence). “**” indicates the disparity is significant at a 10% level or better (90% confidence). “***” indicates significance at a 5% level or better (95% confidence).

TABLE C-13.
DETAILED UTILIZATION, AVAILABILITY, AND DISPARITY ANALYSES
WSSC WATER MARKETPLACE
ARCHITECTURE & ENGINEERING
NONMINORITY FEMALE FIRMS

NAICS-4	NAICS-4 DESC	NONMINORITY FEMALE			
		Utilization	Availability	Disparity	Significance
2371	Utility system construction	0.00%	13.94%	0.00%	***
2379	Other heavy construction	100.00%	21.95%		
2381	Building foundation and exterior contractors	0.00%	18.51%	0.00%	***
4233	Lumber and const. supply merchant wholesalers	100.00%	11.52%		
4236	Appliance and electric goods merchant whls.	0.00%	9.28%	0.00%	***
5324	Machinery and equipment rental and leasing	0.00%	27.27%	0.00%	***
5413	Architectural and engineering services	2.44%	14.76%	16.53%	***
5415	Computer systems design and related services	0.00%	10.95%	0.00%	***
5416	Management and technical consulting services	33.51%	16.74%		
5418	Advertising, PR, and related services	30.83%	22.62%		
5613	Employment services	0.00%	14.39%	0.00%	***
5619	Other support services	93.52%	18.25%		
5621	Waste collection	0.00%	1.41%	0.00%	
5622	Waste treatment and disposal	0.00%	29.54%	0.00%	***
5629	Remediation and other waste services	1.28%	11.30%	11.36%	***

Note: Disparity index values may vary slightly from calculations of depicted figures due to rounding of presented levels of utilization and availability. “*” indicates an adverse disparity that is statistically significant at the 15% level or better (85% confidence). “**” indicates the disparity is significant at a 10% level or better (90% confidence). “***” indicates significance at a 5% level or better (95% confidence).

TABLE C-14.
DETAILED UTILIZATION, AVAILABILITY, AND DISPARITY ANALYSES
WSSC WATER MARKETPLACE
ARCHITECTURE & ENGINEERING
M/WBE FIRMS

NAICS-4	NAICS-4 DESC	M/WBE			
		Utilization	Availability	Disparity	Significance
2371	Utility system construction	64.70%	40.55%		
2379	Other heavy construction	100.00%	45.38%		
2381	Building foundation and exterior contractors	100.00%	72.37%		
4233	Lumber and const. supply merchant wholesalers	100.00%	29.43%		
4236	Appliance and electric goods merchant whls.	100.00%	27.27%		
5324	Machinery and equipment rental and leasing	0.00%	45.55%	0.00%	***
5413	Architectural and engineering services	27.40%	55.97%	48.96%	***
5415	Computer systems design and related services	53.92%	45.95%		
5416	Management and technical consulting services	98.59%	48.69%		
5418	Advertising, PR, and related services	100.00%	36.93%		
5613	Employment services	100.00%	45.03%		
5619	Other support services	100.00%	67.25%		
5621	Waste collection	100.00%	5.63%		
5622	Waste treatment and disposal	100.00%	60.52%		
5629	Remediation and other waste services	81.82%	35.61%		

Note: Disparity index values may vary slightly from calculations of depicted figures due to rounding of presented levels of utilization and availability. “*” indicates an adverse disparity that is statistically significant at the 15% level or better (85% confidence). “***” indicates the disparity is significant at a 10% level or better (90% confidence). “****” indicates significance at a 5% level or better (95% confidence).

TABLE C-15.
DETAILED UTILIZATION, AVAILABILITY, AND DISPARITY ANALYSES
WSSC WATER MARKETPLACE
PROFESSIONAL SERVICES
AFRICAN AMERICAN FIRMS

NAICS-4	NAICS-4 DESC	AFRICAN AMERICAN			
		Utilization	Availability	Disparity	Significance
2371	Utility system construction	0.00%	7.20%	0.00%	**
2389	Other specialty trade contractors	100.00%	9.40%		
4233	Lumber and const. supply merchant wholesalers	100.00%	3.38%		
5239	Other financial investment activities	0.00%	20.07%	0.00%	***
5241	Insurance carriers	0.00%	0.00%		
5242	Insurance agencies and brokerages	1.29%	9.24%	13.98%	**
5324	Machinery and equipment rental and leasing	0.00%	18.28%	0.00%	***
5411	Legal services	10.33%	7.36%		
5412	Accounting and bookkeeping services	17.65%	32.84%	53.74%	***
5413	Architectural and engineering services	35.88%	14.29%		
5414	Specialized design services	0.00%	9.35%	0.00%	***
5415	Computer systems design and related services	2.25%	15.37%	14.67%	***

NAICS-4	NAICS-4 DESC	AFRICAN AMERICAN			
		Utilization	Availability	Disparity	Significance
5416	Management and technical consulting services	6.14%	22.91%	26.79%	***
5418	Advertising, PR, and related services	32.93%	9.54%		
5419	Other professional and technical services	64.32%	29.66%		
5613	Employment services	100.00%	18.51%		
5614	Business support services	0.00%	31.23%	0.00%	***
5617	Services to buildings and dwellings	0.00%	20.31%	0.00%	***
5619	Other support services	100.00%	34.66%		
6114	Business, computer and management training	13.33%	34.01%	39.20%	***
6115	Technical and trade schools	0.00%	34.17%	0.00%	***
6116	Other schools and instruction	0.00%	16.77%	0.00%	***
6117	Educational support services	0.00%	29.88%	0.00%	***
6211	Offices of physicians	0.00%	0.08%	0.00%	
6213	Offices of other health practitioners	0.00%	16.72%	0.00%	***

Note: Disparity index values may vary slightly from calculations of depicted figures due to rounding of presented levels of utilization and availability. “*” indicates an adverse disparity that is statistically significant at the 15% level or better (85% confidence). “***” indicates the disparity is significant at a 10% level or better (90% confidence). “****” indicates significance at a 5% level or better (95% confidence).

TABLE C-16.
DETAILED UTILIZATION, AVAILABILITY, AND DISPARITY ANALYSES
WSSC WATER MARKETPLACE
PROFESSIONAL SERVICES
ASIAN AMERICAN FIRMS

NAICS-4	NAICS-4 DESC	ASIAN AMERICAN			
		Utilization	Availability	Disparity	Significance
2371	Utility system construction	0.00%	8.27%	0.00%	***
2389	Other specialty trade contractors	0.00%	1.68%	0.00%	
4233	Lumber and const. supply merchant wholesalers	0.00%	5.80%	0.00%	**
5239	Other financial investment activities	0.00%	0.05%	0.00%	
5241	Insurance carriers	0.00%	0.00%		
5242	Insurance agencies and brokerages	0.00%	0.02%	0.00%	
5324	Machinery and equipment rental and leasing	0.00%	0.00%		
5411	Legal services	3.96%	5.82%	68.07%	
5412	Accounting and bookkeeping services	0.00%	7.64%	0.00%	***
5413	Architectural and engineering services	12.14%	18.80%	64.57%	
5414	Specialized design services	37.93%	0.36%		
5415	Computer systems design and related services	8.38%	14.67%	57.12%	
5416	Management and technical consulting services	2.06%	4.31%	47.91%	
5418	Advertising, PR, and related services	2.75%	4.50%	61.04%	
5419	Other professional and technical services	0.00%	9.97%	0.00%	***
5613	Employment services	0.00%	7.23%	0.00%	**
5614	Business support services	0.00%	10.51%	0.00%	***
5617	Services to buildings and dwellings	0.00%	1.76%	0.00%	
5619	Other support services	0.00%	7.20%	0.00%	**
6114	Business, computer and management training	0.00%	0.81%	0.00%	
6115	Technical and trade schools	0.00%	0.39%	0.00%	
6116	Other schools and instruction	0.00%	5.59%	0.00%	**
6117	Educational support services	0.00%	0.74%	0.00%	
6211	Offices of physicians	0.00%	0.00%		
6213	Offices of other health practitioners	0.00%	0.00%		

Note: Disparity index values may vary slightly from calculations of depicted figures due to rounding of presented levels of utilization and availability. “*” indicates an adverse disparity that is statistically significant at the 15% level or better (85% confidence). “***” indicates the disparity is significant at a 10% level or better (90% confidence). “****” indicates significance at a 5% level or better (95% confidence).

TABLE C-17.
DETAILED UTILIZATION, AVAILABILITY, AND DISPARITY ANALYSES
WSSC WATER MARKETPLACE
PROFESSIONAL SERVICES
HISPANIC AMERICAN FIRMS

NAICS-4	NAICS-4 DESC	HISPANIC AMERICAN			
		Utilization	Availability	Disparity	Significance
2371	Utility system construction	0.00%	11.14%	0.00%	***
2389	Other specialty trade contractors	0.00%	13.56%	0.00%	***
4233	Lumber and const. supply merchant wholesalers	0.00%	8.72%	0.00%	***
5239	Other financial investment activities	0.00%	0.00%		
5241	Insurance carriers	0.00%	0.00%		
5242	Insurance agencies and brokerages	0.00%	4.58%	0.00%	*
5324	Machinery and equipment rental and leasing	0.40%	0.00%		
5411	Legal services	0.00%	1.46%	0.00%	
5412	Accounting and bookkeeping services	0.00%	3.75%	0.00%	
5413	Architectural and engineering services	6.87%	7.45%	92.14%	
5414	Specialized design services	0.00%	0.21%	0.00%	
5415	Computer systems design and related services	0.04%	4.37%	0.94%	*
5416	Management and technical consulting services	0.81%	4.67%	17.39%	
5418	Advertising, PR, and related services	0.00%	0.23%	0.00%	
5419	Other professional and technical services	0.00%	4.05%	0.00%	
5613	Employment services	0.00%	2.60%	0.00%	
5614	Business support services	0.00%	0.05%	0.00%	
5617	Services to buildings and dwellings	0.00%	19.18%	0.00%	***
5619	Other support services	0.00%	7.13%	0.00%	**
6114	Business, computer and management training	0.00%	16.67%	0.00%	***
6115	Technical and trade schools	0.00%	0.19%	0.00%	
6116	Other schools and instruction	0.00%	0.12%	0.00%	
6117	Educational support services	0.00%	0.25%	0.00%	
6211	Offices of physicians	0.00%	0.00%		
6213	Offices of other health practitioners	0.00%	16.67%	0.00%	***

Note: Disparity index values may vary slightly from calculations of depicted figures due to rounding of presented levels of utilization and availability. “*” indicates an adverse disparity that is statistically significant at the 15% level or better (85% confidence). “***” indicates the disparity is significant at a 10% level or better (90% confidence). “****” indicates significance at a 5% level or better (95% confidence).

TABLE C-18.
DETAILED UTILIZATION, AVAILABILITY, AND DISPARITY ANALYSES
WSSC WATER MARKETPLACE
PROFESSIONAL SERVICES
NATIVE AMERICAN FIRMS

NAICS-4	NAICS-4 DESC	NATIVE AMERICAN			
		Utilization	Availability	Disparity	Significance
2371	Utility system construction	0.00%	0.00%		
2389	Other specialty trade contractors	0.00%	1.78%	0.00%	
4233	Lumber and const. supply merchant wholesalers	0.00%	0.00%		
5239	Other financial investment activities	0.00%	0.00%		
5241	Insurance carriers	0.00%	0.00%		
5242	Insurance agencies and brokerages	0.00%	4.55%	0.00%	*
5324	Machinery and equipment rental and leasing	0.00%	0.00%		
5411	Legal services	0.00%	0.01%	0.00%	
5412	Accounting and bookkeeping services	0.00%	0.00%		
5413	Architectural and engineering services	0.00%	0.67%	0.00%	
5414	Specialized design services	0.00%	0.00%		
5415	Computer systems design and related services	0.00%	0.59%	0.00%	
5416	Management and technical consulting services	0.00%	0.06%	0.00%	
5418	Advertising, PR, and related services	0.00%	0.04%	0.00%	
5419	Other professional and technical services	0.00%	0.01%	0.00%	
5613	Employment services	0.00%	2.30%	0.00%	
5614	Business support services	0.00%	0.04%	0.00%	
5617	Services to buildings and dwellings	0.00%	0.84%	0.00%	
5619	Other support services	0.00%	0.01%	0.00%	
6114	Business, computer and management training	0.00%	0.00%		
6115	Technical and trade schools	0.00%	0.00%		
6116	Other schools and instruction	0.00%	0.00%		
6117	Educational support services	0.00%	0.00%		
6211	Offices of physicians	0.00%	0.00%		
6213	Offices of other health practitioners	0.00%	0.15%	0.00%	

Note: Disparity index values may vary slightly from calculations of depicted figures due to rounding of presented levels of utilization and availability. “*” indicates an adverse disparity that is statistically significant at the 15% level or better (85% confidence). “***” indicates the disparity is significant at a 10% level or better (90% confidence). “****” indicates significance at a 5% level or better (95% confidence).

TABLE C-19.
DETAILED UTILIZATION, AVAILABILITY, AND DISPARITY ANALYSES
WSSC WATER MARKETPLACE
PROFESSIONAL SERVICES
MBE FIRMS

NAICS-4	NAICS-4 DESC	MBE			
		Utilization	Availability	Disparity	Significance
2371	Utility system construction	0.00%	26.61%	0.00%	***
2389	Other specialty trade contractors	100.00%	26.42%		
4233	Lumber and const. supply merchant wholesalers	100.00%	17.91%		
5239	Other financial investment activities	0.00%	20.12%	0.00%	***
5241	Insurance carriers	0.00%	0.00%		
5242	Insurance agencies and brokerages	1.29%	18.38%	7.02%	***
5324	Machinery and equipment rental and leasing	0.40%	18.28%	2.18%	***
5411	Legal services	14.29%	14.64%	97.60%	
5412	Accounting and bookkeeping services	17.65%	44.22%	39.91%	***
5413	Architectural and engineering services	54.88%	41.21%		
5414	Specialized design services	37.93%	9.92%		
5415	Computer systems design and related services	10.68%	35.00%	30.50%	***
5416	Management and technical consulting services	9.01%	31.95%	28.21%	***
5418	Advertising, PR, and related services	35.68%	14.32%		
5419	Other professional and technical services	64.32%	43.69%		
5613	Employment services	100.00%	30.64%		
5614	Business support services	0.00%	41.83%	0.00%	***
5617	Services to buildings and dwellings	0.00%	42.08%	0.00%	***
5619	Other support services	100.00%	49.00%		
6114	Business, computer and management training	13.33%	51.48%	25.89%	***
6115	Technical and trade schools	0.00%	34.75%	0.00%	***
6116	Other schools and instruction	0.00%	22.47%	0.00%	***
6117	Educational support services	0.00%	30.87%	0.00%	***
6211	Offices of physicians	0.00%	0.08%	0.00%	
6213	Offices of other health practitioners	0.00%	33.54%	0.00%	***

Note: Disparity index values may vary slightly from calculations of depicted figures due to rounding of presented levels of utilization and availability. “*” indicates an adverse disparity that is statistically significant at the 15% level or better (85% confidence). “***” indicates the disparity is significant at a 10% level or better (90% confidence). “****” indicates significance at a 5% level or better (95% confidence).

TABLE C-20.
DETAILED UTILIZATION, AVAILABILITY, AND DISPARITY ANALYSES
WSSC WATER MARKETPLACE
PROFESSIONAL SERVICES
NONMINORITY FEMALE FIRMS

NAICS-4	NAICS-4 DESC	NONMINORITY FEMALE			
		Utilization	Availability	Disparity	Significance
2371	Utility system construction	0.00%	13.94%	0.00%	***
2389	Other specialty trade contractors	0.00%	12.13%	0.00%	***
4233	Lumber and const. supply merchant wholesalers	0.00%	11.52%	0.00%	***
5239	Other financial investment activities	0.00%	0.02%	0.00%	
5241	Insurance carriers	0.00%	0.16%	0.00%	
5242	Insurance agencies and brokerages	0.00%	9.12%	0.00%	***
5324	Machinery and equipment rental and leasing	0.00%	27.27%	0.00%	***
5411	Legal services	0.17%	14.55%	1.20%	***
5412	Accounting and bookkeeping services	0.00%	7.57%	0.00%	***
5413	Architectural and engineering services	0.39%	14.76%	2.66%	***
5414	Specialized design services	0.00%	35.08%	0.00%	***
5415	Computer systems design and related services	1.10%	10.95%	10.05%	***
5416	Management and technical consulting services	13.45%	16.74%	80.32%	
5418	Advertising, PR, and related services	13.39%	22.62%	59.20%	*
5419	Other professional and technical services	0.00%	19.84%	0.00%	***
5613	Employment services	0.00%	14.39%	0.00%	***
5614	Business support services	0.00%	20.84%	0.00%	***
5617	Services to buildings and dwellings	100.00%	14.19%		
5619	Other support services	0.00%	18.25%	0.00%	***
6114	Business, computer and management training	0.75%	1.48%	50.90%	
6115	Technical and trade schools	0.00%	17.15%	0.00%	***
6116	Other schools and instruction	0.00%	33.49%	0.00%	***
6117	Educational support services	0.00%	1.16%	0.00%	
6211	Offices of physicians	0.00%	33.39%	0.00%	***
6213	Offices of other health practitioners	0.00%	16.82%	0.00%	***

Note: Disparity index values may vary slightly from calculations of depicted figures due to rounding of presented levels of utilization and availability. “*” indicates an adverse disparity that is statistically significant at the 15% level or better (85% confidence). “***” indicates the disparity is significant at a 10% level or better (90% confidence). “****” indicates significance at a 5% level or better (95% confidence).

TABLE C-21.
DETAILED UTILIZATION, AVAILABILITY, AND DISPARITY ANALYSES
WSSC WATER MARKETPLACE
PROFESSIONAL SERVICES
M/WBE FIRMS

NAICS-4	NAICS-4 DESC	M/WBE			
		Utilization	Availability	Disparity	Significance
2371	Utility system construction	0.00%	40.55%	0.00%	***
2389	Other specialty trade contractors	100.00%	38.55%		
4233	Lumber and const. supply merchant wholesalers	100.00%	29.43%		
5239	Other financial investment activities	0.00%	20.15%	0.00%	***
5241	Insurance carriers	0.00%	0.16%	0.00%	
5242	Insurance agencies and brokerages	1.29%	27.51%	4.69%	***
5324	Machinery and equipment rental and leasing	0.40%	45.55%	0.87%	***
5411	Legal services	14.46%	29.19%	49.54%	***
5412	Accounting and bookkeeping services	17.65%	51.80%	34.07%	***
5413	Architectural and engineering services	55.27%	55.97%	98.76%	
5414	Specialized design services	37.93%	45.00%	84.30%	
5415	Computer systems design and related services	11.78%	45.95%	25.63%	***
5416	Management and technical consulting services	22.46%	48.69%	46.13%	***
5418	Advertising, PR, and related services	49.06%	36.93%		
5419	Other professional and technical services	64.32%	63.53%		
5613	Employment services	100.00%	45.03%		
5614	Business support services	0.00%	62.67%	0.00%	***
5617	Services to buildings and dwellings	100.00%	56.27%		
5619	Other support services	100.00%	67.25%		
6114	Business, computer and management training	14.08%	52.96%	26.59%	***
6115	Technical and trade schools	0.00%	51.90%	0.00%	***
6116	Other schools and instruction	0.00%	55.96%	0.00%	***
6117	Educational support services	0.00%	32.03%	0.00%	***
6211	Offices of physicians	0.00%	33.47%	0.00%	***
6213	Offices of other health practitioners	0.00%	50.36%	0.00%	***

Note: Disparity index values may vary slightly from calculations of depicted figures due to rounding of presented levels of utilization and availability. “*” indicates an adverse disparity that is statistically significant at the 15% level or better (85% confidence). “***” indicates the disparity is significant at a 10% level or better (90% confidence). “****” indicates significance at a 5% level or better (95% confidence).

TABLE C-22.
DETAILED UTILIZATION, AVAILABILITY, AND DISPARITY ANALYSES
WSSC WATER MARKETPLACE
GOODS & SERVICES
AFRICAN AMERICAN FIRMS

NAICS-4	NAICS-4 DESC	AFRICAN AMERICAN			
		Utilization	Availability	Disparity	Significance
1125	Aquaculture	0.00%	0.00%		
1151	Support activities for crop production	0.00%	2.27%	0.00%	**
2213	Water, sewage and other systems	0.00%	0.00%		
2362	Nonresidential building construction	100.00%	13.46%		
2371	Utility system construction	94.65%	7.20%		
2379	Other heavy construction	0.00%	8.12%	0.00%	***
2382	Building equipment contractors	0.00%	10.86%	0.00%	***
2383	Building finishing contractors	0.00%	3.63%	0.00%	***
2389	Other specialty trade contractors	0.00%	9.40%	0.00%	***
3221	Pulp, paper, and paperboard mills	0.00%	0.00%		
3231	Printing and related support activities	0.00%	8.56%	0.00%	***
3241	Petroleum and coal products manufacturing	0.00%	2.63%	0.00%	**
3251	Basic chemical manufacturing	0.00%	0.00%		
3252	Resin, rubber, and artificial fibers mfg.	0.00%	0.00%		
3253	Agricultural chemical manufacturing	0.00%	0.00%		
3259	Other chemical product and preparation mfg.	0.00%	0.00%		
3273	Cement and concrete product manufacturing	0.00%	1.47%	0.00%	
3315	Foundries	0.00%	0.00%		
3327	Machine shops and threaded product mfg.	0.00%	0.36%	0.00%	
3329	Other fabricated metal product manufacturing	1.78%	14.29%	12.47%	***
3331	Ag., construction, and mining machinery mfg.	0.00%	0.00%		
3332	Industrial machinery manufacturing	0.00%	0.00%		
3333	Commercial and service industry machinery	0.00%	35.24%	0.00%	***
3334	HVAC and commercial refrigeration equipment	0.00%	0.00%		
3339	Other general purpose machinery manufacturing	0.00%	0.00%		
3341	Computer and peripheral equipment mfg.	0.00%	2.04%	0.00%	**
3342	Communications equipment manufacturing	0.00%	0.00%		
3343	Audio and video equipment manufacturing	0.00%	1.37%	0.00%	
3345	Electronic instrument manufacturing	16.68%	0.00%		
3353	Electrical equipment manufacturing	0.00%	0.00%		
3359	Other electrical equipment and component mfg.	0.00%	0.00%		
3362	Motor vehicle body and trailer manufacturing	0.00%	0.00%		
3399	Other miscellaneous manufacturing	0.00%	17.14%	0.00%	***
4231	Motor vehicle and parts merchant wholesalers	0.00%	0.00%		
4233	Lumber and const. supply merchant wholesalers	29.01%	3.38%		
4234	Commercial equip. merchant wholesalers	0.00%	2.81%	0.00%	***
4235	Metal and mineral merchant wholesalers	0.00%	0.50%	0.00%	
4236	Appliance and electric goods merchant whls.	1.82%	9.09%	20.01%	***
4237	Hardware and plumbing merchant wholesalers	47.59%	6.25%		
4238	Machinery and supply merchant wholesalers	27.71%	36.96%	74.97%	***

NAICS-4	NAICS-4 DESC	AFRICAN AMERICAN			
		Utilization	Availability	Disparity	Significance
4239	Misc. durable goods merchant wholesalers	100.00%	14.49%		
4241	Paper and paper product merchant wholesalers	63.75%	18.83%		
4243	Apparel and piece goods merchant wholesalers	0.00%	0.00%		
4246	Chemical merchant wholesalers	1.41%	0.82%		
4249	Misc. nondurable goods merchant wholesalers	0.00%	0.00%		
4411	Automobile dealers	0.00%	7.66%	0.00%	***
4412	Other motor vehicle dealers	0.00%	0.00%		
4413	Auto parts, accessories, and tire stores	0.00%	0.11%	0.00%	
4421	Furniture stores	0.00%	7.14%	0.00%	***
4543	Direct selling establishments	17.17%	0.51%		
4842	Specialized freight trucking	59.59%	13.36%		
4855	Charter bus industry	0.00%	2.43%	0.00%	**
4884	Support activities for road transportation	0.00%	27.32%	0.00%	***
4889	Other support activities for transportation	0.00%	2.63%	0.00%	**
4911	Postal service	0.00%	0.00%		
4921	Couriers and express delivery services	0.00%	0.00%		
4931	Warehousing and storage	0.00%	0.71%	0.00%	
5112	Software publishers	0.00%	18.57%	0.00%	***
5121	Motion picture and video industries	0.00%	12.76%	0.00%	***
5182	Data processing, hosting and related services	0.00%	6.28%	0.00%	***
5191	Other information services	0.00%	1.14%	0.00%	
5413	Architectural and engineering services	85.59%	14.29%		
5415	Computer systems design and related services	7.40%	15.37%	48.13%	***
5416	Management and technical consulting services	6.13%	22.91%	26.78%	***
5613	Employment services	25.76%	18.51%		
5614	Business support services	22.87%	31.23%	73.22%	***
5616	Investigation and security services	43.31%	19.45%		
5617	Services to buildings and dwellings	33.32%	20.31%		
5619	Other support services	2.70%	34.66%	7.80%	***
5621	Waste collection	47.73%	2.11%		
5622	Waste treatment and disposal	32.73%	24.80%		
5629	Remediation and other waste services	21.60%	12.13%		
7115	Independent artists, writers, and performers	0.00%	13.41%	0.00%	***
7223	Special food services	0.00%	33.51%	0.00%	***
8111	Automotive repair and maintenance	0.00%	14.38%	0.00%	***
8112	Electronic equipment repair and maintenance	0.00%	19.81%	0.00%	***
8113	Commercial machinery repair and maintenance	0.00%	0.51%	0.00%	
8114	Household goods repair and maintenance	0.00%	30.02%	0.00%	***
8123	Drycleaning and laundry services	4.04%	0.00%		

Note: Disparity index values may vary slightly from calculations of depicted figures due to rounding of presented levels of utilization and availability. “*” indicates an adverse disparity that is statistically significant at the 15% level or better (85% confidence). “***” indicates the disparity is significant at a 10% level or better (90% confidence). “****” indicates significance at a 5% level or better (95% confidence).

TABLE C-23.
DETAILED UTILIZATION, AVAILABILITY, AND DISPARITY ANALYSES
WSSC WATER MARKETPLACE
GOODS & SERVICES
ASIAN AMERICAN FIRMS

NAICS-4	NAICS-4 DESC	ASIAN AMERICAN			
		Utilization	Availability	Disparity	Significance
1125	Aquaculture	0.00%	0.00%		
1151	Support activities for crop production	0.00%	0.00%		
2213	Water, sewage and other systems	0.00%	0.00%		
2362	Nonresidential building construction	0.00%	6.16%	0.00%	***
2371	Utility system construction	0.00%	8.27%	0.00%	***
2379	Other heavy construction	0.00%	14.76%	0.00%	***
2382	Building equipment contractors	0.00%	2.17%	0.00%	**
2383	Building finishing contractors	0.00%	2.92%	0.00%	***
2389	Other specialty trade contractors	0.00%	1.68%	0.00%	*
3221	Pulp, paper, and paperboard mills	0.00%	0.00%		
3231	Printing and related support activities	0.00%	17.01%	0.00%	***
3241	Petroleum and coal products manufacturing	0.00%	0.00%		
3251	Basic chemical manufacturing	0.00%	0.00%		
3252	Resin, rubber, and artificial fibers mfg.	0.00%	0.00%		
3253	Agricultural chemical manufacturing	0.00%	0.00%		
3259	Other chemical product and preparation mfg.	0.00%	1.54%	0.00%	*
3273	Cement and concrete product manufacturing	0.00%	0.00%		
3315	Foundries	0.00%	0.00%		
3327	Machine shops and threaded product mfg.	0.00%	0.00%		
3329	Other fabricated metal product manufacturing	0.00%	5.17%	0.00%	***
3331	Ag., construction, and mining machinery mfg.	0.00%	0.00%		
3332	Industrial machinery manufacturing	0.00%	0.00%		
3333	Commercial and service industry machinery	0.00%	0.00%		
3334	HVAC and commercial refrigeration equipment	0.00%	0.00%		
3339	Other general purpose machinery manufacturing	0.00%	0.00%		
3341	Computer and peripheral equipment mfg.	0.00%	0.00%		
3342	Communications equipment manufacturing	0.00%	0.00%		
3343	Audio and video equipment manufacturing	0.00%	1.37%	0.00%	
3345	Electronic instrument manufacturing	0.00%	0.45%	0.00%	
3353	Electrical equipment manufacturing	0.00%	0.00%		
3359	Other electrical equipment and component mfg.	0.00%	0.00%		
3362	Motor vehicle body and trailer manufacturing	0.00%	0.00%		
3399	Other miscellaneous manufacturing	0.00%	0.38%	0.00%	
4231	Motor vehicle and parts merchant wholesalers	0.00%	0.00%		
4233	Lumber and const. supply merchant wholesalers	1.59%	5.80%	27.35%	***
4234	Commercial equip. merchant wholesalers	0.00%	9.87%	0.04%	***
4235	Metal and mineral merchant wholesalers	100.00%	0.00%		
4236	Appliance and electric goods merchant whls.	0.00%	8.67%	0.00%	***
4237	Hardware and plumbing merchant wholesalers	0.12%	0.18%	64.35%	
4238	Machinery and supply merchant wholesalers	0.00%	14.54%	0.00%	***

NAICS-4	NAICS-4 DESC	ASIAN AMERICAN			
		Utilization	Availability	Disparity	Significance
4239	Misc. durable goods merchant wholesalers	0.00%	28.71%	0.00%	***
4241	Paper and paper product merchant wholesalers	31.90%	0.34%		
4243	Apparel and piece goods merchant wholesalers	0.00%	0.00%		
4246	Chemical merchant wholesalers	0.00%	6.67%	0.00%	***
4249	Misc. nondurable goods merchant wholesalers	0.00%	0.00%		
4411	Automobile dealers	0.00%	0.00%		
4412	Other motor vehicle dealers	0.00%	0.00%		
4413	Auto parts, accessories, and tire stores	0.00%	0.00%		
4421	Furniture stores	0.00%	0.10%	0.00%	
4543	Direct selling establishments	0.00%	0.00%		
4842	Specialized freight trucking	0.10%	0.33%	30.48%	
4855	Charter bus industry	0.00%	0.35%	0.00%	
4884	Support activities for road transportation	0.00%	0.06%	0.00%	
4889	Other support activities for transportation	0.00%	0.00%		
4911	Postal service	0.00%	0.00%		
4921	Couriers and express delivery services	0.00%	0.31%	0.00%	
4931	Warehousing and storage	0.00%	0.18%	0.00%	
5112	Software publishers	0.00%	0.64%	0.00%	
5121	Motion picture and video industries	0.00%	7.76%	0.00%	***
5182	Data processing, hosting and related services	24.75%	6.12%		
5191	Other information services	0.00%	1.14%	0.00%	
5413	Architectural and engineering services	5.18%	18.80%	27.56%	***
5415	Computer systems design and related services	55.89%	14.67%		
5416	Management and technical consulting services	0.00%	4.31%	0.00%	***
5613	Employment services	27.28%	7.23%		
5614	Business support services	0.08%	10.51%	0.79%	***
5616	Investigation and security services	0.00%	2.59%	0.00%	**
5617	Services to buildings and dwellings	2.77%	1.76%		
5619	Other support services	86.47%	7.20%		
5621	Waste collection	0.00%	0.70%	0.00%	
5622	Waste treatment and disposal	0.00%	6.17%	0.00%	***
5629	Remediation and other waste services	11.72%	0.58%		
7115	Independent artists, writers, and performers	0.00%	13.36%	0.00%	***
7223	Special food services	0.00%	11.21%	0.00%	***
8111	Automotive repair and maintenance	0.00%	4.80%	0.00%	***
8112	Electronic equipment repair and maintenance	15.63%	9.89%		
8113	Commercial machinery repair and maintenance	0.00%	0.00%		
8114	Household goods repair and maintenance	0.00%	20.07%	0.00%	***
8123	Drycleaning and laundry services	0.00%	28.78%	0.00%	***

Note: Disparity index values may vary slightly from calculations of depicted figures due to rounding of presented levels of utilization and availability. “*” indicates an adverse disparity that is statistically significant at the 15% level or better (85% confidence). “***” indicates the disparity is significant at a 10% level or better (90% confidence). “****” indicates significance at a 5% level or better (95% confidence).

TABLE C-24.
DETAILED UTILIZATION, AVAILABILITY, AND DISPARITY ANALYSES
WSSC WATER MARKETPLACE
GOODS & SERVICES
HISPANIC AMERICAN FIRMS

NAICS-4	NAICS-4 DESC	HISPANIC AMERICAN			
		Utilization	Availability	Disparity	Significance
1125	Aquaculture	0.00%	0.00%		
1151	Support activities for crop production	0.00%	0.00%		
2213	Water, sewage and other systems	0.00%	0.00%		
2362	Nonresidential building construction	0.00%	5.39%	0.00%	***
2371	Utility system construction	5.35%	11.14%		
2379	Other heavy construction	0.00%	0.00%		
2382	Building equipment contractors	0.00%	4.91%	0.00%	***
2383	Building finishing contractors	100.00%	15.02%		
2389	Other specialty trade contractors	0.00%	13.56%	0.00%	***
3221	Pulp, paper, and paperboard mills	0.00%	0.00%		
3231	Printing and related support activities	0.00%	8.48%	0.00%	***
3241	Petroleum and coal products manufacturing	0.00%	2.63%	0.00%	**
3251	Basic chemical manufacturing	0.00%	0.00%		
3252	Resin, rubber, and artificial fibers mfg.	0.00%	0.00%		
3253	Agricultural chemical manufacturing	0.00%	0.00%		
3259	Other chemical product and preparation mfg.	0.00%	0.00%		
3273	Cement and concrete product manufacturing	0.00%	0.00%		
3315	Foundries	0.00%	0.00%		
3327	Machine shops and threaded product mfg.	0.00%	0.54%	0.00%	
3329	Other fabricated metal product manufacturing	9.76%	4.63%		
3331	Ag., construction, and mining machinery mfg.	0.00%	0.00%		
3332	Industrial machinery manufacturing	0.00%	0.00%		
3333	Commercial and service industry machinery	0.00%	0.00%		
3334	HVAC and commercial refrigeration equipment	0.00%	0.00%		
3339	Other general purpose machinery manufacturing	0.00%	0.00%		
3341	Computer and peripheral equipment mfg.	0.00%	0.00%		
3342	Communications equipment manufacturing	0.00%	0.00%		
3343	Audio and video equipment manufacturing	0.00%	0.00%		
3345	Electronic instrument manufacturing	20.27%	0.00%		
3353	Electrical equipment manufacturing	0.00%	0.00%		
3359	Other electrical equipment and component mfg.	0.00%	2.25%	0.00%	**
3362	Motor vehicle body and trailer manufacturing	0.00%	0.00%		
3399	Other miscellaneous manufacturing	0.00%	0.00%		
4231	Motor vehicle and parts merchant wholesalers	0.00%	0.00%		
4233	Lumber and const. supply merchant wholesalers	0.00%	8.72%	0.00%	***
4234	Commercial equip. merchant wholesalers	0.00%	4.19%	0.00%	***
4235	Metal and mineral merchant wholesalers	0.00%	0.00%		
4236	Appliance and electric goods merchant whls.	0.00%	0.24%	0.00%	
4237	Hardware and plumbing merchant wholesalers	0.00%	0.37%	0.00%	
4238	Machinery and supply merchant wholesalers	0.82%	13.77%	5.93%	***

NAICS-4	NAICS-4 DESC	HISPANIC AMERICAN			
		Utilization	Availability	Disparity	Significance
4239	Misc. durable goods merchant wholesalers	0.00%	14.51%	0.00%	***
4241	Paper and paper product merchant wholesalers	0.00%	0.00%		
4243	Apparel and piece goods merchant wholesalers	0.00%	0.00%		
4246	Chemical merchant wholesalers	0.00%	0.00%		
4249	Misc. nondurable goods merchant wholesalers	0.00%	0.00%		
4411	Automobile dealers	0.00%	0.14%	0.00%	
4412	Other motor vehicle dealers	0.00%	0.00%		
4413	Auto parts, accessories, and tire stores	0.00%	6.67%	0.00%	***
4421	Furniture stores	0.00%	7.14%	0.00%	***
4543	Direct selling establishments	0.00%	12.50%	0.00%	***
4842	Specialized freight trucking	7.82%	8.68%	90.04%	
4855	Charter bus industry	0.00%	0.35%	0.00%	
4884	Support activities for road transportation	0.00%	9.19%	0.00%	***
4889	Other support activities for transportation	0.00%	0.00%		
4911	Postal service	0.00%	0.00%		
4921	Couriers and express delivery services	0.00%	0.62%	0.00%	
4931	Warehousing and storage	0.00%	0.00%		
5112	Software publishers	0.00%	0.24%	0.00%	
5121	Motion picture and video industries	0.00%	4.19%	0.00%	***
5182	Data processing, hosting and related services	0.00%	0.18%	0.00%	
5191	Other information services	0.00%	0.00%		
5413	Architectural and engineering services	4.65%	7.45%		
5415	Computer systems design and related services	0.00%	4.37%	0.00%	***
5416	Management and technical consulting services	0.00%	4.67%	0.00%	***
5613	Employment services	0.00%	2.60%	0.00%	**
5614	Business support services	0.00%	0.05%	0.00%	
5616	Investigation and security services	0.00%	2.59%	0.00%	**
5617	Services to buildings and dwellings	22.39%	19.18%		
5619	Other support services	0.00%	7.13%	0.00%	***
5621	Waste collection	0.00%	1.41%	0.00%	
5622	Waste treatment and disposal	0.00%	0.00%		
5629	Remediation and other waste services	0.00%	11.30%	0.00%	***
7115	Independent artists, writers, and performers	0.00%	6.67%	0.00%	***
7223	Special food services	0.00%	22.33%	0.00%	***
8111	Automotive repair and maintenance	25.44%	8.40%		
8112	Electronic equipment repair and maintenance	0.00%	0.21%	0.00%	
8113	Commercial machinery repair and maintenance	0.00%	0.00%		
8114	Household goods repair and maintenance	0.00%	0.08%	0.00%	
8123	Drycleaning and laundry services	0.00%	14.29%	0.00%	***

Note: Disparity index values may vary slightly from calculations of depicted figures due to rounding of presented levels of utilization and availability. “*” indicates an adverse disparity that is statistically significant at the 15% level or better (85% confidence). “***” indicates the disparity is significant at a 10% level or better (90% confidence). “****” indicates significance at a 5% level or better (95% confidence).

TABLE C-25.
DETAILED UTILIZATION, AVAILABILITY, AND DISPARITY ANALYSES
WSSC WATER MARKETPLACE
GOODS & SERVICES
NATIVE AMERICAN FIRMS

NAICS-4	NAICS-4 DESC	NATIVE AMERICAN			
		Utilization	Availability	Disparity	Significance
1125	Aquaculture	0.00%	0.00%		
1151	Support activities for crop production	0.00%	0.00%		
2213	Water, sewage and other systems	0.00%	0.00%		
2362	Nonresidential building construction	0.00%	2.44%	0.00%	**
2371	Utility system construction	0.00%	0.00%		
2379	Other heavy construction	0.00%	0.55%	0.00%	
2382	Building equipment contractors	0.00%	0.61%	0.00%	
2383	Building finishing contractors	0.00%	1.40%	0.00%	
2389	Other specialty trade contractors	0.00%	1.78%	0.00%	*
3221	Pulp, paper, and paperboard mills	0.00%	0.00%		
3231	Printing and related support activities	0.00%	0.08%	0.00%	
3241	Petroleum and coal products manufacturing	0.00%	0.00%		
3251	Basic chemical manufacturing	0.00%	0.00%		
3252	Resin, rubber, and artificial fibers mfg.	0.00%	0.00%		
3253	Agricultural chemical manufacturing	0.00%	0.00%		
3259	Other chemical product and preparation mfg.	0.00%	0.00%		
3273	Cement and concrete product manufacturing	0.00%	0.00%		
3315	Foundries	0.00%	0.00%		
3327	Machine shops and threaded product mfg.	0.00%	0.00%		
3329	Other fabricated metal product manufacturing	0.00%	0.00%		
3331	Ag., construction, and mining machinery mfg.	0.00%	0.00%		
3332	Industrial machinery manufacturing	0.00%	0.00%		
3333	Commercial and service industry machinery	0.00%	0.00%		
3334	HVAC and commercial refrigeration equipment	0.00%	0.00%		
3339	Other general purpose machinery manufacturing	0.00%	0.00%		
3341	Computer and peripheral equipment mfg.	0.00%	0.00%		
3342	Communications equipment manufacturing	0.00%	0.00%		
3343	Audio and video equipment manufacturing	0.00%	0.00%		
3345	Electronic instrument manufacturing	0.00%	0.00%		
3353	Electrical equipment manufacturing	0.00%	0.00%		
3359	Other electrical equipment and component mfg.	0.00%	0.00%		
3362	Motor vehicle body and trailer manufacturing	0.00%	0.00%		
3399	Other miscellaneous manufacturing	0.00%	0.19%	0.00%	
4231	Motor vehicle and parts merchant wholesalers	0.00%	0.00%		
4233	Lumber and const. supply merchant wholesalers	0.00%	0.00%		
4234	Commercial equip. merchant wholesalers	0.00%	0.06%	0.00%	
4235	Metal and mineral merchant wholesalers	0.00%	0.50%	0.00%	
4236	Appliance and electric goods merchant whls.	0.00%	0.00%		
4237	Hardware and plumbing merchant wholesalers	0.00%	0.00%		
4238	Machinery and supply merchant wholesalers	0.00%	3.62%	0.00%	***

NAICS-4	NAICS-4 DESC	NATIVE AMERICAN			
		Utilization	Availability	Disparity	Significance
4239	Misc. durable goods merchant wholesalers	0.00%	0.00%		
4241	Paper and paper product merchant wholesalers	0.00%	0.00%		
4243	Apparel and piece goods merchant wholesalers	0.00%	0.00%		
4246	Chemical merchant wholesalers	0.00%	0.00%		
4249	Misc. nondurable goods merchant wholesalers	0.00%	0.00%		
4411	Automobile dealers	0.00%	0.00%		
4412	Other motor vehicle dealers	0.00%	0.00%		
4413	Auto parts, accessories, and tire stores	0.00%	6.67%	0.00%	***
4421	Furniture stores	0.00%	0.00%		
4543	Direct selling establishments	0.00%	0.00%		
4842	Specialized freight trucking	0.00%	0.00%		
4855	Charter bus industry	0.00%	0.00%		
4884	Support activities for road transportation	0.00%	0.00%		
4889	Other support activities for transportation	0.00%	0.00%		
4911	Postal service	0.00%	0.00%		
4921	Couriers and express delivery services	0.00%	0.00%		
4931	Warehousing and storage	0.00%	0.36%	0.00%	
5112	Software publishers	0.00%	0.24%	0.00%	
5121	Motion picture and video industries	0.00%	0.00%		
5182	Data processing, hosting and related services	0.00%	0.09%	0.00%	
5191	Other information services	0.00%	0.00%		
5413	Architectural and engineering services	0.00%	0.67%	0.00%	
5415	Computer systems design and related services	0.00%	0.59%	0.00%	
5416	Management and technical consulting services	0.00%	0.06%	0.00%	
5613	Employment services	0.00%	2.30%	0.00%	**
5614	Business support services	0.00%	0.04%	0.00%	
5616	Investigation and security services	0.00%	2.52%	0.00%	**
5617	Services to buildings and dwellings	0.00%	0.84%	0.00%	
5619	Other support services	0.00%	0.01%	0.00%	
5621	Waste collection	0.00%	0.00%		
5622	Waste treatment and disposal	0.00%	0.00%		
5629	Remediation and other waste services	0.00%	0.29%	0.00%	
7115	Independent artists, writers, and performers	0.00%	0.03%	0.00%	
7223	Special food services	0.00%	0.06%	0.00%	
8111	Automotive repair and maintenance	0.00%	4.76%	0.00%	***
8112	Electronic equipment repair and maintenance	0.00%	0.21%	0.00%	
8113	Commercial machinery repair and maintenance	0.00%	0.00%		
8114	Household goods repair and maintenance	0.00%	0.00%		
8123	Drycleaning and laundry services	0.00%	0.00%		

Note: Disparity index values may vary slightly from calculations of depicted figures due to rounding of presented levels of utilization and availability. “*” indicates an adverse disparity that is statistically significant at the 15% level or better (85% confidence). “**” indicates the disparity is significant at a 10% level or better (90% confidence). “***” indicates significance at a 5% level or better (95% confidence).

TABLE C-26.
DETAILED UTILIZATION, AVAILABILITY, AND DISPARITY ANALYSES
WSSC WATER MARKETPLACE
GOODS & SERVICES
MBE FIRMS

NAICS-4	NAICS-4 DESC	MBE			
		Utilization	Availability	Disparity	Significance
1125	Aquaculture	0.00%	0.00%		
1151	Support activities for crop production	0.00%	2.27%	0.00%	**
2213	Water, sewage and other systems	0.00%	0.00%		
2362	Nonresidential building construction	100.00%	27.45%		
2371	Utility system construction	100.00%	26.61%		
2379	Other heavy construction	0.00%	23.43%	0.00%	***
2382	Building equipment contractors	0.00%	18.55%	0.00%	***
2383	Building finishing contractors	100.00%	22.97%		
2389	Other specialty trade contractors	0.00%	26.42%	0.00%	***
3221	Pulp, paper, and paperboard mills	0.00%	0.00%		
3231	Printing and related support activities	0.00%	34.13%	0.00%	***
3241	Petroleum and coal products manufacturing	0.00%	5.26%	0.00%	***
3251	Basic chemical manufacturing	0.00%	0.00%		
3252	Resin, rubber, and artificial fibers mfg.	0.00%	0.00%		
3253	Agricultural chemical manufacturing	0.00%	0.00%		
3259	Other chemical product and preparation mfg.	0.00%	1.54%	0.00%	*
3273	Cement and concrete product manufacturing	0.00%	1.47%	0.00%	
3315	Foundries	0.00%	0.00%		
3327	Machine shops and threaded product mfg.	0.00%	0.91%	0.00%	
3329	Other fabricated metal product manufacturing	11.54%	24.09%	47.91%	***
3331	Ag., construction, and mining machinery mfg.	0.00%	0.00%		
3332	Industrial machinery manufacturing	0.00%	0.00%		
3333	Commercial and service industry machinery	0.00%	35.24%	0.00%	***
3334	HVAC and commercial refrigeration equipment	0.00%	0.00%		
3339	Other general purpose machinery manufacturing	0.00%	0.00%		
3341	Computer and peripheral equipment mfg.	0.00%	2.04%	0.00%	**
3342	Communications equipment manufacturing	0.00%	0.00%		
3343	Audio and video equipment manufacturing	0.00%	2.74%	0.00%	**
3345	Electronic instrument manufacturing	36.95%	0.45%		
3353	Electrical equipment manufacturing	0.00%	0.00%		
3359	Other electrical equipment and component mfg.	0.00%	2.25%	0.00%	**
3362	Motor vehicle body and trailer manufacturing	0.00%	0.00%		
3399	Other miscellaneous manufacturing	0.00%	17.70%	0.00%	***
4231	Motor vehicle and parts merchant wholesalers	0.00%	0.00%		
4233	Lumber and const. supply merchant wholesalers	30.60%	17.91%		
4234	Commercial equip. merchant wholesalers	0.00%	16.93%	0.02%	***
4235	Metal and mineral merchant wholesalers	100.00%	0.99%		
4236	Appliance and electric goods merchant whls.	1.82%	18.00%	10.10%	***
4237	Hardware and plumbing merchant wholesalers	47.71%	6.80%		
4238	Machinery and supply merchant wholesalers	28.52%	68.88%	41.41%	***

NAICS-4	NAICS-4 DESC	MBE			
		Utilization	Availability	Disparity	Significance
4239	Misc. durable goods merchant wholesalers	100.00%	57.70%		
4241	Paper and paper product merchant wholesalers	95.65%	19.17%		
4243	Apparel and piece goods merchant wholesalers	0.00%	0.00%		
4246	Chemical merchant wholesalers	1.41%	7.49%	18.85%	***
4249	Misc. nondurable goods merchant wholesalers	0.00%	0.00%		
4411	Automobile dealers	0.00%	7.80%	0.00%	***
4412	Other motor vehicle dealers	0.00%	0.00%		
4413	Auto parts, accessories, and tire stores	0.00%	13.44%	0.00%	***
4421	Furniture stores	0.00%	14.38%	0.00%	***
4543	Direct selling establishments	17.17%	13.01%		
4842	Specialized freight trucking	67.52%	22.38%		
4855	Charter bus industry	0.00%	3.13%	0.00%	***
4884	Support activities for road transportation	0.00%	36.57%	0.00%	***
4889	Other support activities for transportation	0.00%	2.63%	0.00%	**
4911	Postal service	0.00%	0.00%		
4921	Couriers and express delivery services	0.00%	0.93%	0.00%	
4931	Warehousing and storage	0.00%	1.25%	0.00%	
5112	Software publishers	0.00%	19.69%	0.00%	***
5121	Motion picture and video industries	0.00%	24.71%	0.00%	***
5182	Data processing, hosting and related services	24.75%	12.67%		
5191	Other information services	0.00%	2.27%	0.00%	**
5413	Architectural and engineering services	95.42%	41.21%		
5415	Computer systems design and related services	63.29%	35.00%		
5416	Management and technical consulting services	6.13%	31.95%	19.20%	***
5613	Employment services	53.05%	30.64%		
5614	Business support services	22.95%	41.83%	54.86%	***
5616	Investigation and security services	43.31%	27.15%		
5617	Services to buildings and dwellings	58.47%	42.08%		
5619	Other support services	89.17%	49.00%		
5621	Waste collection	47.73%	4.23%		
5622	Waste treatment and disposal	32.73%	30.98%		
5629	Remediation and other waste services	33.31%	24.31%		
7115	Independent artists, writers, and performers	0.00%	33.47%	0.00%	***
7223	Special food services	0.00%	67.11%	0.00%	***
8111	Automotive repair and maintenance	25.44%	32.34%	78.66%	**
8112	Electronic equipment repair and maintenance	15.63%	30.11%	51.91%	***
8113	Commercial machinery repair and maintenance	0.00%	0.51%	0.00%	
8114	Household goods repair and maintenance	0.00%	50.17%	0.00%	***
8123	Drycleaning and laundry services	4.04%	43.07%	9.39%	***

Note: Disparity index values may vary slightly from calculations of depicted figures due to rounding of presented levels of utilization and availability. “*” indicates an adverse disparity that is statistically significant at the 15% level or better (85% confidence). “***” indicates the disparity is significant at a 10% level or better (90% confidence). “****” indicates significance at a 5% level or better (95% confidence).

TABLE C-27.
DETAILED UTILIZATION, AVAILABILITY, AND DISPARITY ANALYSES
WSSC WATER MARKETPLACE
GOODS & SERVICES
NONMINORITY FEMALE FIRMS

NAICS-4	NAICS-4 DESC	NONMINORITY FEMALE			
		Utilization	Availability	Disparity	Significance
1125	Aquaculture	0.00%	0.00%		
1151	Support activities for crop production	0.00%	2.27%	0.00%	**
2213	Water, sewage and other systems	0.00%	0.00%		
2362	Nonresidential building construction	0.00%	11.42%	0.00%	***
2371	Utility system construction	0.00%	13.94%	0.00%	***
2379	Other heavy construction	100.00%	21.95%		
2382	Building equipment contractors	0.00%	12.25%	0.00%	***
2383	Building finishing contractors	0.00%	12.78%	0.00%	***
2389	Other specialty trade contractors	91.64%	12.13%		
3221	Pulp, paper, and paperboard mills	0.00%	0.00%		
3231	Printing and related support activities	96.26%	25.00%		
3241	Petroleum and coal products manufacturing	18.59%	25.00%	74.37%	**
3251	Basic chemical manufacturing	0.00%	0.00%		
3252	Resin, rubber, and artificial fibers mfg.	0.00%	0.00%		
3253	Agricultural chemical manufacturing	0.00%	0.00%		
3259	Other chemical product and preparation mfg.	0.00%	0.00%		
3273	Cement and concrete product manufacturing	0.00%	1.47%	0.00%	
3315	Foundries	0.00%	0.00%		
3327	Machine shops and threaded product mfg.	0.00%	0.72%	0.00%	
3329	Other fabricated metal product manufacturing	0.00%	33.92%	0.00%	***
3331	Ag., construction, and mining machinery mfg.	0.00%	0.00%		
3332	Industrial machinery manufacturing	0.00%	2.38%	0.00%	**
3333	Commercial and service industry machinery	0.00%	0.00%		
3334	HVAC and commercial refrigeration equipment	0.00%	0.00%		
3339	Other general purpose machinery manufacturing	0.00%	0.00%		
3341	Computer and peripheral equipment mfg.	0.00%	1.02%	0.00%	
3342	Communications equipment manufacturing	0.00%	51.20%	0.00%	***
3343	Audio and video equipment manufacturing	0.00%	2.74%	0.00%	**
3345	Electronic instrument manufacturing	21.53%	0.00%		
3353	Electrical equipment manufacturing	0.00%	0.00%		
3359	Other electrical equipment and component mfg.	0.00%	0.00%		
3362	Motor vehicle body and trailer manufacturing	0.00%	7.69%	0.00%	***
3399	Other miscellaneous manufacturing	49.86%	17.07%		
4231	Motor vehicle and parts merchant wholesalers	0.00%	0.00%		
4233	Lumber and const. supply merchant wholesalers	7.31%	11.52%	63.47%	*
4234	Commercial equip. merchant wholesalers	16.86%	13.90%		
4235	Metal and mineral merchant wholesalers	0.00%	1.49%	0.00%	
4236	Appliance and electric goods merchant whls.	0.00%	9.28%	0.00%	***
4237	Hardware and plumbing merchant wholesalers	38.83%	16.79%		
4238	Machinery and supply merchant wholesalers	0.67%	16.79%	4.02%	***

NAICS-4	NAICS-4 DESC	NONMINORITY FEMALE			
		Utilization	Availability	Disparity	Significance
4239	Misc. durable goods merchant wholesalers	0.00%	0.34%	0.00%	
4241	Paper and paper product merchant wholesalers	0.00%	33.45%	0.00%	***
4243	Apparel and piece goods merchant wholesalers	0.00%	0.00%		
4246	Chemical merchant wholesalers	13.10%	20.33%	64.46%	***
4249	Misc. nondurable goods merchant wholesalers	0.00%	33.33%	0.00%	***
4411	Automobile dealers	0.00%	7.79%	0.00%	***
4412	Other motor vehicle dealers	0.00%	99.82%	0.00%	***
4413	Auto parts, accessories, and tire stores	0.00%	13.52%	0.00%	***
4421	Furniture stores	97.69%	28.43%		
4543	Direct selling establishments	1.63%	37.31%	4.38%	***
4842	Specialized freight trucking	27.22%	13.26%		
4855	Charter bus industry	90.66%	0.35%		
4884	Support activities for road transportation	0.00%	9.16%	0.00%	***
4889	Other support activities for transportation	0.00%	5.26%	0.00%	***
4911	Postal service	0.00%	0.00%		
4921	Couriers and express delivery services	27.33%	0.62%		
4931	Warehousing and storage	0.00%	20.07%	0.00%	***
5112	Software publishers	0.00%	13.81%	0.00%	***
5121	Motion picture and video industries	0.00%	11.64%	0.00%	***
5182	Data processing, hosting and related services	0.00%	11.18%	0.00%	***
5191	Other information services	0.00%	0.00%		
5413	Architectural and engineering services	4.30%	14.76%	29.11%	***
5415	Computer systems design and related services	2.53%	10.95%	23.15%	***
5416	Management and technical consulting services	93.87%	16.74%		
5613	Employment services	9.55%	14.39%	66.36%	*
5614	Business support services	0.00%	20.84%	0.00%	***
5616	Investigation and security services	0.00%	7.46%	0.00%	***
5617	Services to buildings and dwellings	3.24%	14.19%	22.86%	***
5619	Other support services	0.00%	18.25%	0.00%	***
5621	Waste collection	0.00%	1.41%	0.00%	
5622	Waste treatment and disposal	9.16%	29.54%	31.02%	***
5629	Remediation and other waste services	1.10%	11.30%	9.75%	***
7115	Independent artists, writers, and performers	0.00%	6.75%	0.00%	***
7223	Special food services	0.00%	22.30%	0.00%	***
8111	Automotive repair and maintenance	0.00%	13.14%	0.00%	***
8112	Electronic equipment repair and maintenance	0.00%	10.04%	0.00%	***
8113	Commercial machinery repair and maintenance	0.00%	40.23%	0.00%	***
8114	Household goods repair and maintenance	0.00%	0.08%	0.00%	
8123	Drycleaning and laundry services	87.87%	0.10%		

Note: Disparity index values may vary slightly from calculations of depicted figures due to rounding of presented levels of utilization and availability. “*” indicates an adverse disparity that is statistically significant at the 15% level or better (85% confidence). “***” indicates the disparity is significant at a 10% level or better (90% confidence). “****” indicates significance at a 5% level or better (95% confidence).

TABLE C-28.
DETAILED UTILIZATION, AVAILABILITY, AND DISPARITY ANALYSES
WSSC WATER MARKETPLACE
GOODS & SERVICES
M/WBE FIRMS

NAICS-4	NAICS-4 DESC	M/WBE			
		Utilization	Availability	Disparity	Significance
1125	Aquaculture	0.00%	0.00%		
1151	Support activities for crop production	0.00%	4.55%	0.00%	***
2213	Water, sewage and other systems	0.00%	0.00%		
2362	Nonresidential building construction	100.00%	38.87%		
2371	Utility system construction	100.00%	40.55%		
2379	Other heavy construction	100.00%	45.38%		
2382	Building equipment contractors	0.00%	30.79%	0.00%	***
2383	Building finishing contractors	100.00%	35.75%		
2389	Other specialty trade contractors	91.64%	38.55%		
3221	Pulp, paper, and paperboard mills	0.00%	0.00%		
3231	Printing and related support activities	96.26%	59.13%		
3241	Petroleum and coal products manufacturing	18.59%	30.26%	61.44%	***
3251	Basic chemical manufacturing	0.00%	0.00%		
3252	Resin, rubber, and artificial fibers mfg.	0.00%	0.00%		
3253	Agricultural chemical manufacturing	0.00%	0.00%		
3259	Other chemical product and preparation mfg.	0.00%	1.54%	0.00%	*
3273	Cement and concrete product manufacturing	0.00%	2.94%	0.00%	***
3315	Foundries	0.00%	0.00%		
3327	Machine shops and threaded product mfg.	0.00%	1.63%	0.00%	*
3329	Other fabricated metal product manufacturing	11.54%	58.02%	19.90%	***
3331	Ag., construction, and mining machinery mfg.	0.00%	0.00%		
3332	Industrial machinery manufacturing	0.00%	2.38%	0.00%	**
3333	Commercial and service industry machinery	0.00%	35.24%	0.00%	***
3334	HVAC and commercial refrigeration equipment	0.00%	0.00%		
3339	Other general purpose machinery manufacturing	0.00%	0.00%		
3341	Computer and peripheral equipment mfg.	0.00%	3.06%	0.00%	***
3342	Communications equipment manufacturing	0.00%	51.20%	0.00%	***
3343	Audio and video equipment manufacturing	0.00%	5.48%	0.00%	***
3345	Electronic instrument manufacturing	58.49%	0.45%		
3353	Electrical equipment manufacturing	0.00%	0.00%		
3359	Other electrical equipment and component mfg.	0.00%	2.25%	0.00%	**
3362	Motor vehicle body and trailer manufacturing	0.00%	7.69%	0.00%	***
3399	Other miscellaneous manufacturing	49.86%	34.78%		
4231	Motor vehicle and parts merchant wholesalers	0.00%	0.00%		
4233	Lumber and const. supply merchant wholesalers	37.91%	29.43%		
4234	Commercial equip. merchant wholesalers	16.86%	30.83%	54.69%	***
4235	Metal and mineral merchant wholesalers	100.00%	2.48%		
4236	Appliance and electric goods merchant whls.	1.82%	27.27%	6.67%	***
4237	Hardware and plumbing merchant wholesalers	86.54%	23.59%		
4238	Machinery and supply merchant wholesalers	29.20%	85.68%	34.08%	***

NAICS-4	NAICS-4 DESC	M/WBE			
		Utilization	Availability	Disparity	Significance
4239	Misc. durable goods merchant wholesalers	100.00%	58.05%		
4241	Paper and paper product merchant wholesalers	95.65%	52.62%		
4243	Apparel and piece goods merchant wholesalers	0.00%	0.00%		
4246	Chemical merchant wholesalers	14.52%	27.81%	52.19%	***
4249	Misc. nondurable goods merchant wholesalers	0.00%	33.33%	0.00%	***
4411	Automobile dealers	0.00%	15.59%	0.00%	***
4412	Other motor vehicle dealers	0.00%	99.82%	0.00%	***
4413	Auto parts, accessories, and tire stores	0.00%	26.95%	0.00%	***
4421	Furniture stores	97.69%	42.82%		
4543	Direct selling establishments	18.81%	50.32%	37.38%	***
4842	Specialized freight trucking	94.74%	35.64%		
4855	Charter bus industry	90.66%	3.47%		
4884	Support activities for road transportation	0.00%	45.73%	0.00%	***
4889	Other support activities for transportation	0.00%	7.89%	0.00%	***
4911	Postal service	0.00%	0.00%		
4921	Couriers and express delivery services	27.33%	1.55%		
4931	Warehousing and storage	0.00%	21.32%	0.00%	***
5112	Software publishers	0.00%	33.50%	0.00%	***
5121	Motion picture and video industries	0.00%	36.35%	0.00%	***
5182	Data processing, hosting and related services	24.75%	23.85%		
5191	Other information services	0.00%	2.27%	0.00%	**
5413	Architectural and engineering services	99.72%	55.97%		
5415	Computer systems design and related services	65.82%	45.95%		
5416	Management and technical consulting services	100.00%	48.69%		
5613	Employment services	62.60%	45.03%		
5614	Business support services	22.95%	62.67%	36.62%	***
5616	Investigation and security services	43.31%	34.61%		
5617	Services to buildings and dwellings	61.72%	56.27%		
5619	Other support services	89.17%	67.25%		
5621	Waste collection	47.73%	5.63%		
5622	Waste treatment and disposal	41.90%	60.52%	69.23%	***
5629	Remediation and other waste services	34.42%	35.61%	96.65%	
7115	Independent artists, writers, and performers	0.00%	40.22%	0.00%	***
7223	Special food services	0.00%	89.41%	0.00%	***
8111	Automotive repair and maintenance	25.44%	45.47%	55.94%	***
8112	Electronic equipment repair and maintenance	15.63%	40.15%	38.93%	***
8113	Commercial machinery repair and maintenance	0.00%	40.74%	0.00%	***
8114	Household goods repair and maintenance	0.00%	50.25%	0.00%	***
8123	Drycleaning and laundry services	91.92%	43.17%		

Note: Disparity index values may vary slightly from calculations of depicted figures due to rounding of presented levels of utilization and availability. “*” indicates an adverse disparity that is statistically significant at the 15% level or better (85% confidence). “***” indicates the disparity is significant at a 10% level or better (90% confidence). “****” indicates significance at a 5% level or better (95% confidence).

Appendix D

D. Private Sector Analysis In-Depth Results - (PUMS) Regression Analysis

Results of Linear Regression- Individual Wages

TABLE D-1.
LINEAR REGRESSION INDIVIDUAL WAGES
WSSC WATER MARKETPLACE
OVERALL

Independent Variables	Specifications		
	(1)	(2)	(3)
AFRICAN AMERICAN	-0.333 (0.00)	-0.332 (0.00)	-0.332 (0.00)
HISPANIC AMERICAN	-0.170 (0.00)	-0.169 (0.00)	-0.169 (0.00)
ASIAN AMERICAN	-0.197 (0.00)	-0.197 (0.00)	-0.197 (0.00)
NATIVE AMERICAN	-0.290 (0.00)	-0.290 (0.00)	-0.290 (0.00)
OTHER	-0.256 (0.00)	-0.256 (0.00)	-0.256 (0.00)
WHITE FEMALE	-0.358 (0.00)	-0.358 (0.00)	-0.358 (0.00)
Age	0.140 (0.00)	0.140 (0.00)	0.140 (0.00)
Age ²	-0.001 (0.00)	-0.001 (0.00)	-0.001 (0.00)
WSSC	0.143 (0.00)	0.148 (0.00)	0.146 (0.00)
WSSC*AFRICAN AMERICAN		-0.022 (0.034)	-0.021 (0.036)
WSSC* HISPANIC AMERICAN		-0.028 (0.117)	-0.026 (0.131)
WSSC*ASIAN AMERICAN		-0.022 (0.311)	
WSSC*NATIVE AMERICAN		0.015 (0.849)	
WSSC*OTHER		-0.015 (0.494)	
WSSC*WHITE FEMALE		-0.001 (0.868)	

Source: The Public Use Microdata Samples (PUMS) data from 2015-2019 American Community Survey and Calculations using SPSS.

TABLE D-2.
LINEAR REGRESSION INDIVIDUAL WAGES
WSSC WATER MARKETPLACE
CONSTRUCTION

Independent Variables	Specifications		
	(1)	(2)	(3)
AFRICAN AMERICAN	-0.332 (0.00)	-0.332 (0.00)	-0.331 (0.00)
HISPANIC AMERICAN	-0.097 (0.00)	-0.098 (0.00)	-0.098 (0.00)
ASIAN AMERICAN	-0.121 (0.00)	-0.12 (0.00)	-0.122 (0.00)
NATIVE AMERICAN	-0.294 (0.00)	-0.293 (0.00)	-0.295 (0.00)
OTHER	-0.177 (0.00)	-0.182 (0.00)	-0.182 (0.00)
WHITE FEMALE	-0.418 (0.00)	-0.42 (0.00)	-0.42 (0.00)
Age	0.102 (0.00)	0.102 (0.00)	0.102 (0.00)
Age²	-0.001 (0.00)	-0.001 (0.00)	-0.001 (0.00)
WSSC	0.179 (0.00)	0.163 (0.00)	0.164 (0.00)
WSSC*AFRICAN AMERICAN		0.016 (0.761)	
WSSC* HISPANIC AMERICAN		0.055 (0.47)	
WSSC*ASIAN AMERICAN		-0.083 (0.614)	
WSSC*NATIVE AMERICAN		-0.352 (0.245)	
WSSC*OTHER		0.253 (0.012)	0.251 (0.013)
WSSC*WHITE FEMALE		0.074 (0.042)	0.072 (0.045)

Source: The Public Use Microdata Samples (PUMS) data from 2015-2019 American Community Survey and Calculations using SPSS.

TABLE D-3.
LINEAR REGRESSION INDIVIDUAL WAGES
WSSC WATER MARKETPLACE
ARCHITECTURE & ENGINEERING

Independent Variables	Specifications		
	(1)	(2)	(3)
AFRICAN AMERICAN	-0.346 (0.00)	-0.353 (0.00)	-0.353 (0.00)
HISPANIC AMERICAN	-0.242 (0.00)	-0.245 (0.00)	-0.245 (0.00)
ASIAN AMERICAN	-0.13 (0.00)	-0.132 (0.00)	-0.129 (0.00)
NATIVE AMERICAN	-0.348 (0.00)	-0.349 (0.00)	-0.35 (0.00)
OTHER	-0.244 (0.00)	-0.246 (0.00)	-0.244 (0.00)
WHITE FEMALE	-0.401 (0.00)	-0.406 (0.00)	-0.405 (0.00)
Age	0.142 (0.00)	0.142 (0.00)	0.142 (0.00)
Age²	-0.002 (0.00)	-0.002 (0.00)	-0.002 (0.00)
WSSC	0.222 (0.00)	0.181 (0.00)	0.185 (0.00)
WSSC*AFRICAN AMERICAN		0.088 (0.001)	0.084 (0.002)
WSSC* HISPANIC AMERICAN		0.065 (0.08)	0.06 (0.103)
WSSC*ASIAN AMERICAN		0.045 (0.225)	
WSSC*NATIVE AMERICAN		-0.014 (0.941)	
WSSC*OTHER		0.039 (0.392)	
WSSC*WHITE FEMALE		0.089 (0.00)	0.085 (0.00)

Source: The Public Use Microdata Samples (PUMS) data from 2015-2019 American Community Survey and Calculations using SPSS.

TABLE D-4.
LINEAR REGRESSION INDIVIDUAL WAGES
WSSC WATER MARKETPLACE
PROFESSIONAL SERVICES

Independent Variables	Specifications		
	(1)	(2)	(3)
AFRICAN AMERICAN	-0.421 (0.00)	-0.419 (0.00)	-0.42 (0.00)
HISPANIC AMERICAN	-0.139 (0.00)	-0.138 (0.00)	-0.138 (0.00)
ASIAN AMERICAN	-0.163 (0.00)	-0.155 (0.00)	-0.156 (0.00)
NATIVE AMERICAN	-0.376 (0.00)	-0.373 (0.00)	-0.376 (0.00)
OTHER	-0.284 (0.00)	-0.281 (0.00)	-0.284 (0.00)
WHITE FEMALE	-0.324 (0.00)	-0.323 (0.00)	-0.324 (0.00)
Age	0.12 (0.00)	0.12 (0.00)	0.12 (0.00)
Age²	-0.001 (0.00)	-0.001 (0.00)	-0.001 (0.00)
WSSC	0.2 (0.00)	0.233 (0.00)	(0.211) (0.00)
WSSC*AFRICAN AMERICAN		-0.072 (0.163)	-0.049 (0.309)
WSSC* HISPANIC AMERICAN		0.01 (0.914)	
WSSC*ASIAN AMERICAN		-0.322 (0.046)	-0.299 (0.062)
WSSC*NATIVE AMERICAN		-0.222 (0.496)	
WSSC*OTHER		-0.148 (0.236)	
WSSC*WHITE FEMALE		-0.048 (0.262)	

Source: The Public Use Microdata Samples (PUMS) data from 2015-2019 American Community Survey and Calculations using SPSS.

TABLE D-5.
LINEAR REGRESSION INDIVIDUAL WAGES
WSSC WATER MARKETPLACE
GOODS & SERVICES

Independent Variables	Specifications		
	(1)	(2)	(3)
AFRICAN AMERICAN	-0.319 (0.00)	-0.319 (0.00)	-0.319 (0.00)
HISPANIC AMERICAN	-0.168 (0.00)	-0.168 (0.00)	-0.168 (0.00)
ASIAN AMERICAN	-0.215 (0.00)	-0.213 (0.00)	-0.213 (0.00)
NATIVE AMERICAN	-0.279 (0.00)	-0.28 (0.00)	-0.279 (0.00)
OTHER	-0.258 (0.00)	-0.257 (0.00)	-0.258 (0.00)
WHITE FEMALE	-0.349 (0.00)	-0.349 (0.00)	-0.349 (0.00)
Age	0.142 (0.00)	0.142 (0.00)	0.142 (0.00)
Age²	-0.002 (0.00)	-0.002 (0.00)	-0.002 (0.00)
WSSC	0.098 (0.00)	0.102 (0.00)	0.1 (0.00)
WSSC*AFRICAN AMERICAN		-0.016 (0.185)	
WSSC* HISPANIC AMERICAN		-0.028 (0.185)	
WSSC*ASIAN AMERICAN		-0.062 (0.185)	-0.059 (0.026)
WSSC*NATIVE AMERICAN		0.105 (0.185)	
WSSC*OTHER		-0.026 (0.185)	
WSSC*WHITE FEMALE		0.003 (0.18)	

Source: The Public Use Microdata Samples (PUMS) data from 2015-2019 American Community Survey and Calculations using SPSS.

Results of Linear Regression-Business Owner's Earnings

TABLE D-6.
LINEAR REGRESSION BUSINESS OWNER'S EARNINGS
WSSC WATER MARKETPLACE
OVERALL

Independent Variables	Specifications		
	(1)	(2)	(3)
AFRICAN AMERICAN	-0.437 (0.00)	-0.436 (0.00)	-0.436 (0.00)
HISPANIC AMERICAN	-0.228 (0.00)	-0.226 (0.00)	-0.228 (0.00)
ASIAN AMERICAN	-0.192 (0.00)	-0.190 (0.00)	-0.191 (0.00)
NATIVE AMERICAN	-0.368 (0.00)	-0.372 (0.00)	-0.368 (0.00)
OTHER	-0.430 (0.00)	-0.431 (0.00)	-0.430 (0.00)
WHITE FEMALE	-0.454 (0.00)	-0.456 (0.00)	-0.456 (0.00)
Age	0.126 (0.00)	0.126 (0.00)	0.126 (0.00)
Age²	-0.001 (0.00)	-0.001 (0.00)	-0.001 (0.00)
WSSC	0.034 (0.201)	-0.011 (0.753)	-0.015 (0.634)
WSSC*AFRICAN AMERICAN		-0.005 (0.95)	
WSSC* HISPANIC AMERICAN		-0.136 (0.284)	
WSSC*ASIAN AMERICAN		-0.030 (0.848)	
WSSC*NATIVE AMERICAN		0.353 (0.336)	
WSSC*OTHER		0.035 (0.805)	
WSSC*WHITE FEMALE		0.119 (0.006)	0.123 (0.002)

Source: The Public Use Microdata Samples (PUMS) data from 2015-2019 American Community Survey and Calculations using SPSS.

TABLE D-7.
LINEAR REGRESSION BUSINESS OWNER'S EARNINGS
WSSC WATER MARKETPLACE
CONSTRUCTION

Independent Variables	Specifications		
	(1)	(2)	(3)
AFRICAN AMERICAN	-0.39 (0.00)	-0.383 (0.00)	-0.39 (0.00)
HISPANIC AMERICAN	-0.103 (0.003)	-0.104 (0.003)	-0.103 (0.003)
ASIAN AMERICAN	-0.126 (0.297)	-0.16 (0.193)	-0.126 (0.297)
NATIVE AMERICAN	-0.22 (0.004)	-0.233 (0.002)	-0.233 (0.002)
OTHER	-0.308 (0.00)	-0.319 (0.00)	-0.308 (0.00)
WHITE FEMALE	-0.664 (0.00)	-0.665 (0.00)	-0.664 (0.00)
Age	0.096 (0.00)	0.096 (0.00)	0.096 (0.00)
Age²	-0.001 (0.00)	-0.001 (0.00)	-0.001 (0.00)
WSSC	0.045 (0.524)	0.024 (0.75)	0.038 (0.593)
WSSC*AFRICAN AMERICAN		-0.251 (0.388)	
WSSC* HISPANIC AMERICAN		0.077 (0.84)	
WSSC*ASIAN AMERICAN		1.334 (0.094)	
WSSC*NATIVE AMERICAN		1.07 (0.117)	1.059 (0.121)
WSSC*OTHER		0.538 (0.177)	
WSSC*WHITE FEMALE		0.035 (0.86)	

Source: The Public Use Microdata Samples (PUMS) data from 2015-2019 American Community Survey and Calculations using SPSS.

TABLE D-8.
LINEAR REGRESSION BUSINESS OWNER'S EARNINGS
WSSC WATER MARKETPLACE
ARCHITECTURE & ENGINEERING

Independent Variables	Specifications		
	(1)	(2)	(3)
AFRICAN AMERICAN	-0.415 (0.00)	-0.386 (0.00)	-0.386 (0.00)
HISPANIC AMERICAN	-0.2 (0.00)	-0.197 (0.00)	-0.202 (0.00)
ASIAN AMERICAN	-0.271 (0.00)	-0.296 (0.00)	-0.297 (0.00)
NATIVE AMERICAN	-0.309 (0.041)	-0.331 (0.031)	-0.309 (0.04)
OTHER	-0.268 (0.00)	-0.265 (0.00)	-0.268 (0.00)
WHITE FEMALE	-0.426 (0.00)	-0.432 (0.00)	-0.433 (0.00)
Age	0.138 (0.00)	0.138 (0.00)	0.138 (0.00)
Age²	-0.001 (0.00)	-0.001 (0.00)	-0.001 (0.00)
WSSC	-0.048 (0.447)	-0.1 (0.178)	-0.11 (0.13)
WSSC*AFRICAN AMERICAN		-0.36 (0.045)	-0.35 (0.05)
WSSC* HISPANIC AMERICAN		-0.208 (0.408)	
WSSC*ASIAN AMERICAN		0.509 (0.055)	0.519 (0.05)
WSSC*NATIVE AMERICAN		0.654 (0.438)	
WSSC*OTHER		-0.067 (0.823)	
WSSC*WHITE FEMALE		0.181 (0.041)	0.191 (0.028)

Source: The Public Use Microdata Samples (PUMS) data from 2015-2019 American Community Survey and Calculations using SPSS.

TABLE D-9.
LINEAR REGRESSION BUSINESS OWNER'S EARNINGS
WSSC WATER MARKETPLACE
PROFESSIONAL SERVICES

Independent Variables	Specifications		
	(1)	(2)	(3)
AFRICAN AMERICAN	-0.611 (0.00)	-0.621 (0.00)	-0.62 (0.00)
HISPANIC AMERICAN	-0.061 (0.243)	-0.069 (0.193)	-0.062 (0.234)
ASIAN AMERICAN	-0.199 (0.142)	-0.216 (0.112)	-0.2 (0.14)
NATIVE AMERICAN	-0.317 (0.021)	-0.332 (0.016)	-0.318 (0.021)
OTHER	-0.451 (0.00)	-0.456 (0.00)	-0.449 (0.00)
WHITE FEMALE	-0.432 (0.00)	-0.436 (0.00)	-0.436 (0.00)
Age	0.157 (0.00)	0.157 (0.00)	0.157 (0.00)
Age²	-0.002 (0.00)	-0.002 (0.00)	-0.002 (0.00)
WSSC	0.137 (0.197)	-0.043 (0.759)	0.023 (0.866)
WSSC*AFRICAN AMERICAN		0.565 (0.096)	0.491 (0.142)
WSSC* HISPANIC AMERICAN		0.744 (0.204)	
WSSC*ASIAN AMERICAN		1.868 (0.218)	
WSSC*NATIVE AMERICAN		1.66 (0.276)	
WSSC*OTHER		0.311 (0.589)	
WSSC*WHITE FEMALE		0.265 (0.142)	0.197 (0.261)

Source: The Public Use Microdata Samples (PUMS) data from 2015-2019 American Community Survey and Calculations using SPSS.

TABLE D-10.
LINEAR REGRESSION BUSINESS OWNER'S EARNINGS
WSSC WATER MARKETPLACE
GOODS & SERVICES

Independent Variables	Specifications		
	(1)	(2)	(3)
AFRICAN AMERICAN	-0.425 (0.00)	-0.427 (0.00)	-0.425 (0.00)
HISPANIC AMERICAN	-0.277 (0.00)	-0.275 (0.00)	-0.276 (0.00)
ASIAN AMERICAN	-0.154 (0.00)	-0.144 (0.00)	-0.143 (0.00)
NATIVE AMERICAN	-0.416 (0.00)	-0.415 (0.00)	-0.416 (0.00)
OTHER	-0.477 (0.00)	-0.476 (0.00)	-0.477 (0.00)
WHITE FEMALE	-0.453 (0.00)	-0.455 (0.00)	-0.453 (0.00)
Age	0.128 (0.00)	0.128 (0.00)	0.128 (0.00)
Age²	-0.001 (0.00)	-0.001 (0.00)	-0.001 (0.00)
WSSC	0.053 (0.00)	0.017 (0.72)	0.06 (0.09)
WSSC*AFRICAN AMERICAN		0.059 (0.539)	
WSSC* HISPANIC AMERICAN		-0.133 (0.429)	
WSSC*ASIAN AMERICAN		-0.388 (0.061)	-0.429 (0.036)
WSSC*NATIVE AMERICAN		-0.15 (0.77)	
WSSC*OTHER		-0.006 (0.973)	
WSSC*WHITE FEMALE		0.088 (0.123)	

Source: The Public Use Microdata Samples (PUMS) data from 2015-2019 American Community Survey and Calculations using SPSS.

Results of Logistics Regression-Formation Rates

TABLE D-11.
LOGISTIC REGRESSION FORMATION RATES
WSSC WATER MARKETPLACE
OVERALL

Independent Variables	Specifications		
	(1)	(2)	(3)
AFRICAN AMERICAN	-0.556 (0.00)	-0.566 (0.00)	-0.566 (0.00)
HISPANIC AMERICAN	-0.446 (0.00)	-0.450 (0.00)	-0.450 (0.00)
ASIAN AMERICAN	-0.391 (0.00)	-0.400 (0.00)	-0.400 (0.00)
NATIVE AMERICAN	-0.372 (0.00)	-0.379 (0.00)	-0.379 (0.00)
OTHER	-0.153 (0.00)	-0.157 (0.00)	-0.157 (0.00)
WHITE FEMALE	-0.203 (0.00)	-0.206 (0.00)	-0.206 (0.00)
Age			
Age²	-0.001 (0.00)	-0.001 (0.00)	-0.001 (0.00)
WSSC	-0.243 (0.00)	-0.347 (0.00)	-0.347 (0.00)
WSSC*AFRICAN AMERICAN		0.330 (0.00)	0.330 (0.00)
WSSC* HISPANIC AMERICAN		0.323 (0.00)	0.323 (0.00)
WSSC*ASIAN AMERICAN		0.323 (0.002)	0.323 (0.002)
WSSC*NATIVE AMERICAN		0.821 (0.004)	0.821 (0.004)
WSSC*OTHER		0.196 (0.05)	0.196 (0.05)
WSSC*WHITE FEMALE		0.177 (0.00)	0.177 (0.00)

Source: The Public Use Microdata Samples (PUMS) data from 2015-2019 American Community Survey and Calculations using SPSS.

TABLE D-12.
LOGISTIC REGRESSION FORMATION RATES
WSSC WATER MARKETPLACE
CONSTRUCTION

Independent Variables	Specifications		
	(1)	(2)	(3)
AFRICAN AMERICAN	-0.506 (0.00)	-0.498 (0.00)	-0.505 (0.00)
HISPANIC AMERICAN	-0.383 (0.00)	-0.383 (0.00)	-0.384 (0.00)
ASIAN AMERICAN	-0.677 (0.00)	-0.714 (0.00)	-0.714 (0.00)
NATIVE AMERICAN	-0.415 (0.00)	-0.422 (0.00)	-0.422 (0.00)
OTHER	-0.147 (0.00)	-0.156 (0.001)	-0.156 (0.001)
WHITE FEMALE	-0.674 (0.00)	-0.676 (0.00)	-0.674 (0.00)
Age			
Age²	-0.001 (0.00)	-0.001 (0.00)	-0.001 (0.00)
WSSC	-0.2 (0.00)	-0.215 (0.00)	-0.217 (0.00)
WSSC*AFRICAN AMERICAN		-0.236 (0.237)	
WSSC* HISPANIC AMERICAN		-0.016 (0.958)	
WSSC*ASIAN AMERICAN		1.313 (0.005)	1.326 (0.005)
WSSC*NATIVE AMERICAN		1.026 (0.113)	
WSSC*OTHER		0.443 (0.149)	
WSSC*WHITE FEMALE		0.072 (0.574)	

Source: The Public Use Microdata Samples (PUMS) data from 2015-2019 American Community Survey and Calculations using SPSS.

TABLE D-13.
LOGISTIC REGRESSION FORMATION RATES
WSSC WATER MARKETPLACE
ARCHITECTURE & ENGINEERING

Independent Variables	Specifications		
	(1)	(2)	(3)
AFRICAN AMERICAN	-0.21 (0.00)	-0.222 (0.00)	-0.222 (0.00)
HISPANIC AMERICAN	-0.18 (0.00)	-0.188 (0.00)	-0.187 (0.00)
ASIAN AMERICAN	-0.527 (0.00)	-0.534 (0.00)	-0.527 (0.00)
NATIVE AMERICAN	0.029 (0.762)	0.026 (0.784)	0.028 (0.774)
OTHER	-0.013 (0.736)	-0.011 (0.781)	-0.013 (0.74)
WHITE FEMALE	-0.066 (0.00)	-0.07 (0.00)	-0.07 (0.00)
Age			
Age²	-0.001 (0.00)	-0.001 (0.00)	-0.001 (0.00)
WSSC	-0.334 (0.00)	-0.395 (0.00)	-0.391 (0.00)
WSSC*AFRICAN AMERICAN		0.192 (0.00)	
WSSC* HISPANIC AMERICAN		0.281 (0.069)	
WSSC*ASIAN AMERICAN		0.176 (0.354)	
WSSC*NATIVE AMERICAN		0.068 (0.929)	
WSSC*OTHER		-0.052 (0.796)	
WSSC*WHITE FEMALE		0.119 (0.036)	0.114 (0.04)

Source: The Public Use Microdata Samples (PUMS) data from 2015-2019 American Community Survey and Calculations using SPSS.

TABLE D-14.
LOGISTIC REGRESSION FORMATION RATES
WSSC WATER MARKETPLACE
PROFESSIONAL SERVICES

Independent Variables	Specifications		
	(1)	(2)	(3)
AFRICAN AMERICAN	-0.899 (0.00)	-0.889 (0.00)	-0.888 (0.00)
HISPANIC AMERICAN	-0.509 (0.00)	-0.51 (0.00)	-0.509 (0.00)
ASIAN AMERICAN	-0.814 (0.00)	-0.797 (0.00)	-0.814 (0.00)
NATIVE AMERICAN	-0.328 (0.001)	-0.326 (0.001)	-0.328 0.001
OTHER	-0.368 (0.00)	-0.367 (0.00)	-0.368 (0.00)
WHITE FEMALE	-0.126 (0.00)	-0.127 (0.00)	-0.126 (0.00)
Age			
Age²	0.00 (0.00)	0.00 (0.00)	0 (0.00)
WSSC	-0.205 (0.004)	-0.199 (0.025)	-0.17 0.019
WSSC*AFRICAN AMERICAN		-0.449 (0.043)	-0.478 0.026
WSSC* HISPANIC AMERICAN		0.137 (0.682)	
WSSC*ASIAN AMERICAN		-1.171 (0.257)	
WSSC*NATIVE AMERICAN		-0.24 (0.824)	
WSSC*OTHER		-0.071 (0.873)	
WSSC*WHITE FEMALE		0.087 (0.471)	

Source: The Public Use Microdata Samples (PUMS) data from 2015-2019 American Community Survey and Calculations using SPSS.

TABLE D-15.
LOGISTIC REGRESSION FORMATION RATES
WSSC WATER MARKETPLACE
GOODS & SERVICES

Independent Variables	Specifications		
	(1)	(2)	(3)
AFRICAN AMERICAN	-0.531 (0.00)	-0.541 (0.00)	-0.541 (0.00)
HISPANIC AMERICAN	-0.484 (0.00)	-0.488 (0.00)	-0.488 (0.00)
ASIAN AMERICAN	-0.292 (0.00)	-0.305 (0.00)	-0.305 (0.00)
NATIVE AMERICAN	-0.397 (0.00)	-0.404 (0.00)	-0.404 (0.00)
OTHER	-0.146 (0.00)	-0.151 (0.00)	-0.151 (0.00)
WHITE FEMALE	-0.186 (0.00)	-0.188 (0.00)	-0.188 (0.00)
Age			
Age²	-0.001 (0.00)	-0.001 (0.00)	-0.001 (0.00)
WSSC	-0.147 (0.00)	-0.256 (0.00)	-0.256 (0.00)
WSSC*AFRICAN AMERICAN		0.345 (0.00)	0.345 (0.00)
WSSC* HISPANIC AMERICAN		0.324 (0.006)	0.324 (0.006)
WSSC*ASIAN AMERICAN		0.543 (0.00)	0.543 (0.00)
WSSC*NATIVE AMERICAN		0.994 (0.008)	0.994 (0.008)
WSSC*OTHER		0.25 (0.055)	0.25 (0.055)
WSSC*WHITE FEMALE		0.133 (0.001)	0.133 (0.001)

Source: The Public Use Microdata Samples (PUMS) data from 2015-2019 American Community Survey and Calculations using SPSS.

Appendix E

E. Custom Census Survey Instrument

ENTER THE D&B D-U-N-S NUMBER

Hello. My name is _____, working on behalf of MGT Consulting Group for the Washington Suburban Sanitary Commission's (WSSC Water) recent Disparity Study. As you may be aware of, WSSC Water has retained MGT Consulting Group to conduct their 2021 Disparity Study. Your company information was received from Dun & Bradstreet to conduct a research study on behalf of WSSC Water. This survey is designed to help WSSC Water identify companies in the marketplace that are available to potentially perform work for WSSC Water.

Is this _____ (Company's name)? IF COMPANY NAME VERIFIED, CONTINUE.

Are you the owner or an authorized decision maker in your company? [IF NO] May I speak with that person? [IF NO, SCHEDULE CALL-BACK]?

IF TRANSFERRED TO ANOTHER PARTY (CFO, MANAGER, ETC): READ INTRO AGAIN then ask Are you able to answer questions concerning business practices of this company? IF YES, CONTINUE.

Thank you for agreeing to participate in this research study. Your input is very important to the outcome of this research study. Your responses to this survey will be aggregated for the overall analysis and used only for this research study. Individual information or identifying characteristics about your company will not be published.

If you have any questions regarding the survey, I will be happy to provide you contact information at the end of the survey.

Q1. What is your title? [REQUIRE ANSWER]

- Owner/CEO/President 1
- Manager/Financial Officer 2
- Other 3

[A - IF THE ANSWER TO Q1 IS NOT OTHER, THEN SKIP TO QUESTION 3]

Q2. Specify Other [REQUIRE ANSWER]

Q3. May I have your name just in case we have any further questions? [REQUIRE ANSWER]

Q4. Based on information we have from Dun & Bradstreet I want to confirm, this is a for-profit company, as opposed to a nonprofit, foundation or government office?

[REQUIRE ANSWER]

- Yes 1
- No 2
- Don't Know 3

[A - IF THE ANSWER TO QUESTION 4 IS **NO** OR **DON'T KNOW**, THEN TERMINATE THE CALL

PLEASE GO BACK TO Q3 AND TYPE "**DISQUALIFIED**" AFTER THE FIRST AND LAST NAME.]

Disqualification statement

Thank you for your input; however, based on your answers, it appears that you do not qualify for this survey because we are only seeking input from for-profit companies.

Q5. Let me confirm that, based on the information we have from Dun & Bradstreet, the company's primary line of business is (*READ NAICS WITH CORRESPONDING DESCRIPTIVE TEXT*)

[REQUIRE ANSWER]

- Yes 1
- No 2
- Don't Know 3

[A – IF THE ANSWER TO QUESTION 7 IS **NOT YES**, THEN ASK QUESTION 8]

Q6. Please SPECIFY your company's Primary Type of work. [REQUIRE ANSWER]

Q7. Thinking about your company's operations, does your company bid or perform work primarily as a prime contractor or consultant? Subcontractor or subconsultant? OR both? [REQUIRE ANSWER]

- Prime Contractor or Consultant 1
- Subcontractor or subconsultant 2
- Both 3
- Don't Know 4

Q8. Is your company **at least 51 percent** owned, managed, and controlled by a woman or women?
[REQUIRE ANSWER]

- Yes 1
- No 2
- Don't Know 3

Q9. Is your company **at least 51 percent** owned, managed, and controlled by a person or people of one of the following racial or ethnic group(s)? [REQUIRE ANSWER]

- Caucasian 1
- African American 2
- Asian American 3
- Hispanic American 4
- Native American 5
- Don't Know 6
- Other 7

That completes our survey. Again, thank you for your input and your participation in this important survey. If you would like more information on the Disparity Study, contact MGT Consulting Group, Andres Bernal at (850) 386-3191 or abernal@mgtconsulting.com or visit the study website at <https://www.wsscwater.com/disparitystudy>.

Appendix F

F. Vendor Survey Instrument



Washington Suburban Sanitary Commission (WSSC Water)

Vendor

Introduction:

Hello, my name is _____ and I am calling on behalf of the Washington Suburban Sanitary Commission (WSSC Water) and we are conducting a Disparity Study to learn more about the firms in the market area so that WSSC Water can adequately act to encourage participation in its contracting activities by area firms.

Is this &V.3& (Company's name)? IF COMPANY NAME VERIFIED, CONTINUE

May I speak with &V.4&? IF NOT AVAILABLE OR NO LONGER WITH COMPANY ASK:

Is there someone else I can talk to who could answer some questions about the business and procurement activities?

IF OWNER or OTHER DECISION MAKER IS PUT ON THE LINE: CONTINUE

Are you the owner or an authorized decision maker in your company?

IF NO OR TRANSFERRED TO ANOTHER PARTY (CFO, MANAGER, ETC): Are you able to answer questions concerning ownership and business practices for this company? IF YES, CONTINUE

IF NO: Is there someone else I can talk to who could answer some questions about the business and procurement activities?

IF NO, SCHEDULE CALL-BACK?

IF NEEDED:

The WSSC Water has retained MGT of America to conduct a disparity study. This is not a sales call. Your responses to this research survey will be aggregated for the overall analysis and used only for the disparity study. Individual information is kept confidential. Your firm has been randomly selected to participate in a survey of businesses to evaluate how WSSC Water buys goods and services; the subcontracting practices of prime contractors/vendors who do business with WSSC Water; and information about doing business or attempting to do business with WSSC Water and/or prime contracting or subcontracting firms between July 1, 2014, and Jun 30, 2019. The results of the study will provide guidance regarding any potential changes to WSSC Water's contracting practices and/or the SLBE Program.

Questionnaire # _____ (1-4)

Q.1 DO NOT ASK; JUST NOTE

Gender:

[REQUIRE ANSWER]

(5)
Male 1
Female 2

Q.2 May I please have your **NAME** just in case we have any further questions?

[REQUIRE ANSWER]

_____ (6-55)

Q.3 What is your **OFFICIAL TITLE**?

[REQUIRE ANSWER]

(56)
Owner 1
CEO/President 2
Manager/Financial Officer 3
Other 4

[S - IF THE ANSWER IS NOT 4, THEN SKIP TO QUESTION 5]

[A - IF THE ANSWER TO QUESTION 3 IS NOT 4, THEN SKIP TO QUESTION 2]

Q.4 Specify **Other**: OFFICIAL TITLE

[REQUIRE ANSWER]

_____ (57-106)

Q.5 What is your company's **PRIMARY LINE OF BUSINESS?**

FROM SAMPLE: [ANSWER TO Q. 88]

- 1. Construction:** (ex. Highway, General Construction, Excavating, Mechanical, Carpentry, Site Work, Electrical, etc.)
- 2. Architectural and Engineering Services:** (ex. Architecture, Civil Engineering, Environmental Engineering, etc.)
- 3. Professional Services:** (ex: Accounting, Legal Services, Construction Management, IT Consulting, Consultant, etc.)
- 4. Goods & Services:** (ex: Furniture, Computers, Books, Maintenance Services, Janitorial Services, Security, Auto Repair, etc.)
- 5. Other** (Please explain your company's primary line of business.)

[REQUIRE ANSWER]

(107)

Construction (ex. highway, general construction, excavating, mechanical, carpentry, site work, electrical, etc.)	1
Architectural and Engineering Services (ex. Architecture, civil engineering, environmental engineering, etc.)	2
Professional Services (ex. accounting, legal services, construction management, IT consulting, consultant, etc.)	3
Goods & Services (ex. furniture, computers, books, maintenance services, janitorial, security, auto repair, etc.)	4
Other (Please specify your company's primary line of business.)	5

[S - IF THE ANSWER IS 3, THEN SKIP TO QUESTION 8]
[S - IF THE ANSWER IS 4, THEN SKIP TO QUESTION 9]
[S - IF THE ANSWER IS 5, THEN SKIP TO QUESTION 10]

[A - IF THE ANSWER TO QUESTION 5 IS NOT 1, THEN SKIP TO QUESTION 9999]

Q.6 Please SPECIFY **Construction** type

[REQUIRE ANSWER]

_____ (108-407)

[A - IF THE ANSWER TO QUESTION 5 IS NOT 2, THEN SKIP TO QUESTION 9999]

Q.7 Please SPECIFY **Architectural / Engineering Services** type

[REQUIRE ANSWER]

_____ (408-707)

[A - IF THE ANSWER TO QUESTION 5 IS NOT 3, THEN SKIP TO QUESTION 9999]

Q.8 Please SPECIFY **Professional Services** type

[REQUIRE ANSWER]

_____ (708-1007)

[A - IF THE ANSWER TO QUESTION 5 IS NOT 4, THEN SKIP TO QUESTION 9999]

Q.9 Please SPECIFY **Goods and Services** type

[REQUIRE ANSWER]

_____ (1008-1307)

[A - IF THE ANSWER TO QUESTION 5 IS NOT 5, THEN SKIP TO QUESTION 11]

Q.10 Please SPECIFY **Other Line of Business**

[REQUIRE ANSWER]

_____ (1308-1607)

Q.11 Is your company **at least 51 percent** owned and controlled by a **WOMAN** or **WOMEN**?

[REQUIRE ANSWER]

(1608)
Yes 1
No 2
Don't know/Refused 3

Q.12 Is your company **at least 51 percent** owned, managed, and controlled by one of the following **RACIAL** or **ETHNIC GROUP(S)**?

[REQUIRE ANSWER]

(1609)
African American/Black 1
Asian American or Pacific Islander 2
Caucasian/White 3
Hispanic American or Latino 4
Native American/American Indian 5
Don't Know/Refused 6
Other (Please specify the race or ethnicity of the
owner(s)/manager(s)) 7

[A - IF THE ANSWER TO QUESTION 12 IS NOT 7, THEN SKIP TO QUESTION 14]

Q.13 Specify **Other**: RACE OR ETHNICITY

[REQUIRE ANSWER]

_____ (1610-1659)

Q.14 What is the **HIGHEST LEVEL OF EDUCATION completed** by the primary owner of your company?

[REQUIRE ANSWER]

(1660)

- Some high school 1
- High school graduate 2
- Trade or technical education 3
- Some college 4
- Associate Degree (AA, AS, etc.) 5
- Bachelor's Degree (BA, BS, etc.) 6
- Graduate or Professional Degree (MA, PhD, JD, etc.) 7
- Don't know/Refused 8

Q.15 What is the **AGE** of the company?

PROBE!

If they don't know age of the company, then ask if they know the year the company was established. If so, note on paper and move on.

[REQUIRE ANSWER]

(1661)

- 0-2 years 1
- 3-5 years 2
- 6-10 years 3
- 11-15 years 4
- 16-20 years 5
- 21+ years 6
- Don't Know/Refused 7

Q.16 What is the average **NUMBER OF EMPLOYEES** on your company's payroll, including full-time and part-time staff?

PROMPT! Would you say the # of employees fall between. read list below.

[REQUIRE ANSWER]

(1662)

- 01– 5 employees 1
- 6 – 9 employees 2
- 10 – 19 employees 3
- 20 – 49 employees 4
- 50 - 499 employees 5
- 500+ 6
- Don't Know/Refused 7

Q.17 Which of the following ranges best approximates your company's **AVERAGE ANNUAL GROSS REVENUE?**

PROMPT THEM TO ANSWER!

Best Guess. Would you say it falls between.... read list below.

[REQUIRE ANSWER]

- (1663)
- <\$100k 1
 - \$100k-\$500k 2
 - \$500k-\$1M 3
 - \$1M-\$5M 4
 - \$5M-\$10M 5
 - >\$10M 6
 - Don't Know/Refused 7

Q.18 Does your company hold any of the following **CERTIFICATIONS:**

READ AND CHECK ALL THAT APPLY.

[REQUIRE ANSWER]

	Yes	No	Don't Know
Minority Business Enterprise (MBE)	1	2	3 (1664)
Woman Business Enterprise (WBE)	1	2	3 (1665)
Small or Small Local Business Enterprise (SBE or SLBE)	1	2	3 (1666)
Disadvantaged Business Enterprise (DBE)	1	2	3 (1667)
Other (Please specify)	1	2	3 (1668)

[A - IF THE ANSWER TO SUB-QUESTION 5 OF QUESTION 18 IS NOT 1, THEN SKIP TO QUESTION 20]

Q.19 Specify **Other:** CERTIFICATIONS

[REQUIRE ANSWER]

_____ (1669-1968)

[A - IF THE ANSWER TO SUB-QUESTION 3 OF QUESTION 18 IS 1, THEN SKIP TO QUESTION 24]

Q.20 SLBE (Small Local Business Enterprise) PROGRAM

Have you applied for **SLBE (Small Local Business Enterprise) APPROVAL** (through WSSC Water)?

[REQUIRE ANSWER]

(1969)
Yes 1
No 2
Don't Know 3

[S - IF THE ANSWER IS 1, THEN SKIP TO QUESTION 24]
[S - IF THE ANSWER IS 3, THEN SKIP TO QUESTION 27]

Q.21 What are your reasons for not applying for SLBE (Small Local Business Enterprise) APPROVAL?

Select all that apply.

[REQUIRE ANSWER]

(1970-1975)
Not applicable. 1
Application process too burdensome. 2
Application process too confusing. 3
I do not feel having the certification would help my business. 4
I do not think I am eligible for certification 5
Other (Please specify other reason) 6

[S - IF THE ANSWER IS 5, THEN SKIP TO QUESTION 22]
[S - IF THE ANSWER IS 6, THEN SKIP TO QUESTION 23]
[S - IF THE ANSWER IS 1-4, THEN SKIP TO QUESTION 27]

[A - IF THE ANSWER TO QUESTION 21 IS NOT 5, THEN SKIP TO QUESTION 23]

Q.22 Specify Reason: WHY YOU THINK YOUR COMPANY IS NOT ELIGIBLE FOR SLBE (Small Local Business Enterprise) APPROVAL

[REQUIRE ANSWER]

_____ (1976-2475)

[A - IF THE ANSWER TO QUESTION 21 IS NOT 6, THEN SKIP TO QUESTION 24]

Q.23 Specify **Other Reason: WHY YOU DID NOT APPLY FOR SLBE (Small Local Business Enterprise) APPROVAL**

[REQUIRE ANSWER]

_____ (2476-2975)

[A - IF THE ANSWER TO SUB-QUESTION 3 OF QUESTION 18 IS NOT 1, THEN SKIP TO QUESTION 27]

Q.24 In your experience, has being **SLBE (Small Local Business Enterprise) approved HELPED** your firm obtain work or grow?

[REQUIRE ANSWER]

(2976)
Yes 1
No 2
Don't Know/ Refused 3

[S - IF THE ANSWER IS 3, THEN SKIP TO QUESTION 27]
[S - IF THE ANSWER IS 1, THEN SKIP TO QUESTION 25]
[S - IF THE ANSWER IS 2, THEN SKIP TO QUESTION 26]

Q.25 How has **SLBE (Small Local Business Enterprise) approval HELPED** your business obtain work or grow?

[REQUIRE ANSWER]

_____ (2977-3476)

[A - IF THE ANSWER TO QUESTION 24 IS NOT 2, THEN SKIP TO QUESTION 27]

Q.26 How has **SLBE (Small Local Business Enterprise) approval NOT HELPED** your business obtain work or grow?

[REQUIRE ANSWER]

_____ (3477-3976)

Q.27 There **is some information we would like to obtain that pertains specifically to whether you work as a prime or a subcontractor.**

Does your company operate **PRIMARILY** as a **PRIME CONTRACTOR/VENDOR/CONSULTANT, SUBCONTRACTOR/SUPPLIER** or **BOTH**?

[REQUIRE ANSWER]

(3977)
Prime contractor/vendor/consultant 1
Subcontractor/supplier 2
Both 3
Don't Know/Refused 4

[S - IF THE ANSWER IS 2, THEN SKIP TO QUESTION 40]

Q.28 PRIME CONTRACTOR

In general, which of the following ranges best approximates the size of your company's **LARGEST PRIME CONTRACT** awarded between **July 1, 2014, and June 30, 2019?**

PROBE! Would you say it falls between... read list below.

[REQUIRE ANSWER]

(3978-3979)

- None 1
- Up to \$50,000? 2
- \$50,001 to \$100,000? 3
- \$100,001 to \$200,000? 4
- \$200,001 to \$300,000? 5
- \$300,001 to \$400,000? 6
- \$400,001 to \$500,000? 7
- \$500,001 to \$1 million? 8
- Over \$1 million? 9
- Don't know/Refused 10

Q.29 In your experience, have any of the following been a **BARRIER** to attempting to do work or working as a **PRIME CONTRACTOR/VENDOR** on **WSSC Water projects?**

[REQUIRE ANSWER]

	Yes	No	Don't Know
Prequalification requirements	1	2	3 (3980-3981)
Visibility or awareness of solicitations/contracting opportunities	1	2	3 (3982-3983)
Bond requirements	1	2	3 (3984-3985)
Proposal/bid specifications	1	2	3 (3986-3987)
Short or limited time given to prepare bid package or quote	1	2	3 (3988-3989)
Unnecessarily restrictive contract specifications	1	2	3 (3990-3991)
Meeting MBE/SLBE program requirements	1	2	3 (3992-3993)
Identifying MBE/SLBE firms	1	2	3 (3994-3995)
Selection process/evaluation criteria	1	2	3 (3996-3997)
Insurance requirements (general liability, professional liability, etc.)	1	2	3 (3998-3999)
Cost of bidding/proposing	1	2	3 (4000-4001)
Price of supplies/materials	1	2	3 (4002-4003)
Competing with large companies	1	2	3 (4004-4005)
Financing	1	2	3 (4006-4007)
Lack of experience	1	2	3 (4008-4009)
Contract too large	1	2	3 (4010-4011)
Informal network of prime contractors and subcontractors that has excluded my company from doing business ("good ole boy" network)	1	2	3 (4012-4013)
Changes in the scope of work (after work began)	1	2	3 (4014-4015)
Slow payment or non-payment for project work	1	2	3 (4016-4017)

Q.30 As a **PRIME CONTRACTOR/VENDOR**, are you required to have **BONDING** for the type of work you bid on?

[REQUIRE ANSWER]

(4018)
Yes 1
No 2
Don't know 3

[S - IF THE ANSWER IS 2-3, THEN SKIP TO QUESTION 32]
[A - IF THE ANSWER TO QUESTION 30 IS NOT 1, THEN SKIP TO QUESTION 32]

Q.31 What is your current **AGGREGATE (TOTAL) BONDING CAPACITY**?

[REQUIRE ANSWER]

(4019)
Below \$100,000? 1
\$100,001 to \$250,000? 2
\$250,001 to \$500,000? 3
\$500,001 to \$1 million? 4
\$1 million to \$1.5 million? 5
\$1.5 million to \$3 million? 6
\$3 million to \$5 million? 7
Over \$5 million? 8
Don't know/Refused 9

Q.32 Have you or your company experienced any of the following **DISCRIMINATORY BEHAVIOR** when bidding or working as a **PRIME CONTRACTOR/VENDOR** on **WSSC Water** projects?

[REQUIRE ANSWER]

	Yes	No	Don't Know
Harassment on the jobsite	1	2	3 (4020)
Unequal or unfair treatment	1	2	3 (4021)
Double standards in performance	1	2	3 (4022)
Denial of opportunity to bid	1	2	3 (4023)
Unfair denial of contract award	1	2	3 (4024)
Unfair termination	1	2	3 (4025)
Unequal price quotes from suppliers	1	2	3 (4026)
Other: Please explain	1	2	3 (4027)

[A - IF THE ANSWER TO SUB-QUESTION 8 OF QUESTION 32 IS NOT 1, THEN SKIP TO QUESTION 34]

Q.33 Specify **Other**: DISCRIMINATORY BEHAVIOR EXPERIENCED AS PRIME CONTRACTOR ON WSSC WATER PROJECTS

[REQUIRE ANSWER]

_____ (4028-4527)

[A - IF THE ANSWER TO SUB-QUESTION 1 OF QUESTION 32 IS NOT 1, AND...]

[A - IF THE ANSWER TO SUB-QUESTION 2 OF QUESTION 32 IS NOT 1, AND...]
 [A - IF THE ANSWER TO SUB-QUESTION 3 OF QUESTION 32 IS NOT 1, AND...]
 [A - IF THE ANSWER TO SUB-QUESTION 4 OF QUESTION 32 IS NOT 1, AND...]
 [A - IF THE ANSWER TO SUB-QUESTION 5 OF QUESTION 32 IS NOT 1, AND...]
 [A - IF THE ANSWER TO SUB-QUESTION 6 OF QUESTION 32 IS NOT 1, AND...]
 [A - IF THE ANSWER TO SUB-QUESTION 7 OF QUESTION 32 IS NOT 1, AND...]

[A - IF THE ANSWER TO SUB-QUESTION 8 OF QUESTION 32 IS NOT 1, THEN SKIP TO QUESTION 40]

Q.34 How did you become **AWARE OF THE DISCRIMINATION** against your company as a **PRIME CONTRACTOR/VENDOR**?

SELECT ALL THAT APPLY!

[REQUIRE ANSWER]

	Yes	No	Don't Know
Verbal comment	1	2	3 (4528)
Written statement/documents	1	2	3 (4529)
Action taken against the company	1	2	3 (4530)
Refused to answer	1	2	3 (4531)
Other action (Specify how you became aware of discrimination against your company)	1	2	3 (4532)

[A - IF THE ANSWER TO SUB-QUESTION 5 OF QUESTION 34 IS NOT 1, THEN SKIP TO QUESTION 36]

Q.35 Specify **Other**: WAY YOU BECAME AWARE OF THE DISCRIMINATION AGAINST YOUR COMPANY

[REQUIRE ANSWER]

_____ (4533-5032)

Q.36 Which of the following do you consider the **PRIMARY REASON** for your company **BEING DISCRIMINATED AGAINST** as a **PRIME CONTRACTOR/VENDOR**?

[REQUIRE ANSWER]

- (5033)
- Owner's race or ethnicity 1
 - Owner's gender 2
 - Both race and gender 3
 - Don't know/Refused 4
 - Other reason (Please explain the reason you believe your company was discriminated against) 5

[S - IF THE ANSWER IS NOT 5, THEN SKIP TO QUESTION 38]

[A - IF THE ANSWER TO QUESTION 36 IS NOT 5, THEN SKIP TO QUESTION 38]

Q.37 Specify **Other**: REASON WHY YOU FEEL YOUR COMPANY WAS DISCRIMINATED AGAINST

[REQUIRE ANSWER]

_____ (5034-5533)

Q.38 Please **BRIEFLY** describe the **DISCRIMINATION** you experienced.

[REQUIRE ANSWER]

_____ (5534-6033)

Q.39 Did you **FILE** a **COMPLAINT**?

[REQUIRE ANSWER]

(6034)
Yes 1
No 2
Don't Know 3

[A - IF THE ANSWER TO QUESTION 27 IS 1 OR 4, THEN SKIP TO QUESTION 53]

Q.40 SUBCONTRACTOR

As a subcontractor, which of the following best approximates your company's **LARGEST SUBCONTRACT AWARDED** between **July 1, 2014**, and **June 30, 2019**?

PROBE! Best Guess.

[REQUIRE ANSWER]

(6035-6036)
None 1
Up to \$50,000 2
\$50,001 to \$100,000 3
\$100,001 to \$200,000 4
\$200,001 to \$300,000 5
\$300,001 to \$400,000 6
\$400,001 to \$500,000 7
\$500,001 to \$1 million 8
Over \$1 million 9
Don't Know/Refused 10

Q.41 In your experience, have any of the following been a **BARRIER** when attempting to do work or working as a **SUBCONTRACTOR** on **WSSC Water** projects?

[REQUIRE ANSWER]

	Yes	No	Don't Know
Visibility or awareness of solicitations/contracting opportunities	1	2	3 (6037-6038)
Bond requirements	1	2	3 (6039-6040)
Short or limited time given to prepare bid package or quote	1	2	3 (6041-6042)
Unnecessarily restrictive contract specifications	1	2	3 (6043-6044)
Selection process/evaluation criteria	1	2	3 (6045-6046)
Insurance requirements (general liability, professional liability, etc.)	1	2	3 (6047-6048)
Cost of bidding/proposing	1	2	3 (6049-6050)
Price of supplies/materials	1	2	3 (6051-6052)
Competing with large companies	1	2	3 (6053-6054)
Financing	1	2	3 (6055-6056)
Lack of experience	1	2	3 (6057-6058)
Contract too large	1	2	3 (6059-6060)
Informal network of prime contractors and subcontractors that has excluded my company from doing business ("good ole boy" network)	1	2	3 (6061-6062)
Changes in the scope of work (after work began)	1	2	3 (6063-6064)
Slow payment or non-payment for project work	1	2	3 (6065-6066)

Q.42 As a **SUBCONTRACTOR/SUPPLIER**, are you required to have **BONDING**?

[REQUIRE ANSWER]

(6067)
 Yes 1
 No 2
 Don't Know/Refused 3

[S - IF THE ANSWER IS 2-3, THEN SKIP TO QUESTION 44]

Q.43 As a **SUBCONTRACTOR**, what is your current **AGGREGATE (TOTAL) BONDING CAPACITY**?

[REQUIRE ANSWER]

(6068)
 Below \$100,000 1
 \$100,001 to \$250,000 2
 \$250,001 to \$500,000 3
 \$500,001 to \$1 million 4
 \$1 million to \$1.5 million 5
 \$1.5 million to \$3 million 6
 \$3 million to \$5 million 7
 Over \$5 million 8
 Don't Know/Refused 9

Q.44 As a **SUBCONTRACTOR**, have you or your company experienced any of the following **DISCRIMINATORY BEHAVIOR** while bidding or working on a **WSSC Water project**?

[REQUIRE ANSWER]

	Yes	No	Don't Know
Harassment on the jobsite	1	2	3 (6069)
Unequal or unfair treatment	1	2	3 (6070)
Double standards in performance	1	2	3 (6071)
Denial of opportunity to bid	1	2	3 (6072)
Unfair denial of contract award	1	2	3 (6073)
Unfair termination	1	2	3 (6074)
Unequal price quotes from suppliers	1	2	3 (6075)
Other: Please explain	1	2	3 (6076)

[A - IF THE ANSWER TO SUB-QUESTION 8 OF QUESTION 44 IS NOT 1, THEN SKIP TO QUESTION 46]

Q.45 Specify **Other**: DISCRIMINATORY BEHAVIOR EXPERIENCED AS A SUBCONTRACTOR ON WSSC WATER PROJECTS

[REQUIRE ANSWER]

_____ (6077-6576)

- [A - IF THE ANSWER TO SUB-QUESTION 1 OF QUESTION 44 IS NOT 1, AND...]
- [A - IF THE ANSWER TO SUB-QUESTION 2 OF QUESTION 44 IS NOT 1, AND...]
- [A - IF THE ANSWER TO SUB-QUESTION 3 OF QUESTION 44 IS NOT 1, AND...]
- [A - IF THE ANSWER TO SUB-QUESTION 3 OF QUESTION 44 IS NOT 1, AND...]
- [A - IF THE ANSWER TO SUB-QUESTION 4 OF QUESTION 44 IS NOT 1, AND...]
- [A - IF THE ANSWER TO SUB-QUESTION 5 OF QUESTION 44 IS NOT 1, AND...]
- [A - IF THE ANSWER TO SUB-QUESTION 6 OF QUESTION 44 IS NOT 1, AND...]
- [A - IF THE ANSWER TO SUB-QUESTION 7 OF QUESTION 44 IS NOT 1, AND...]

[A - IF THE ANSWER TO SUB-QUESTION 8 OF QUESTION 44 IS NOT 1, THEN SKIP TO QUESTION 52]

Q.46 How did you become **AWARE OF THE DISCRIMINATION** against your company as a **SUBCONTRACTOR**?

[REQUIRE ANSWER]

	Yes	No	Don't Know
Verbal comment	1	2	3 (6577)
Written statement/documents	1	2	3 (6578)
Action taken against the company	1	2	3 (6579)
Don't know/ Refused	1	2	3 (6580)
Other action (Specify how you became aware of the discrimination against your company)	1	2	3 (6581)

[A - IF THE ANSWER TO SUB-QUESTION 5 OF QUESTION 46 IS NOT 1, THEN SKIP TO QUESTION 48]

Q.47 Specify **Other**: WAY YOU BECAME AWARE OF DISCRIMINATION AGAINST YOUR COMPANY

[REQUIRE ANSWER]

_____ (6582-7081)

Q.48 Which of the following do you consider the **PRIMARY REASON** for your company **BEING DISCRIMINATED AGAINST** as a **SUBCONTRACTOR**?

[REQUIRE ANSWER]

- (7082)
- Owner's race or ethnicity 1
 - Owner's gender 2
 - Both race and gender 3
 - Don't know/Refused 4
 - Other reason (Explain) 5

[S - IF THE ANSWER IS NOT 5, THEN SKIP TO QUESTION 50]

Q.49 Specify **Other**: PRIMARY REASON YOUR COMPANY WAS DISCRIMINATED AGAINST

[REQUIRE ANSWER]

_____ (7083-7582)

Q.50 Please **BRIEFLY** describe the **DISCRIMINATION** you experienced.

[REQUIRE ANSWER]

_____ (7583-8082)

Q.51 Did you **FILE** a **COMPLAINT**?

[REQUIRE ANSWER]

(8083)
Yes 1
No 2
Don't know 3

Q.52 How often do **PRIME CONTRACTORS** who use your company as a **SUBCONTRACTOR** on public sector projects with **M/WBE GOALS** solicit your company on projects (private or public) **WITHOUT M/WBE GOALS**?

[REQUIRE ANSWER]

(8084)
Very often 1
Sometimes 2
Seldom 3
Never 4
Not applicable 5
Don't know 6

Q.53 PRIVATE SECTOR MARKET

Have you or your company experienced any **DISCRIMINATORY BEHAVIOR** when attempting to do work or working in the **PRIVATE SECTOR**?

[REQUIRE ANSWER]

(8085)
Yes 1
No 2
Do not work in the Private Sector 3
Don't Know 4

[S - IF THE ANSWER IS 2-4, THEN SKIP TO QUESTION 61]

Q.54 Which of the following **DISCRIMINATORY BEHAVIOR** have you experienced when attempting to do work or working in the **PRIVATE SECTOR**?

[REQUIRE ANSWER]

	Yes	No	DK
Harassment on the jobsite	1	2	3 (8086)
Unequal or unfair treatment	1	2	3 (8087)
Double standards in performance	1	2	3 (8088)
Denial of opportunity to bid	1	2	3 (8089)
Unfair denial of contract award	1	2	3 (8090)
Unfair termination	1	2	3 (8091)
Unequal price quotes from suppliers	1	2	3 (8092)
Other: Please explain	1	2	3 (8093)

[A - IF THE ANSWER TO SUB-QUESTION 8 OF QUESTION 54 IS NOT 1, THEN SKIP TO QUESTION 56]

Q.55 Specify **other**: PRIVATE SECTOR DISCRIMINATION

[REQUIRE ANSWER]

(8094-8593)

[A - IF THE ANSWER TO SUB-QUESTION 1 OF QUESTION 54 IS NOT 1, AND...]
 [A - IF THE ANSWER TO SUB-QUESTION 2 OF QUESTION 54 IS NOT 1, AND...]
 [A - IF THE ANSWER TO SUB-QUESTION 3 OF QUESTION 54 IS NOT 1, AND...]
 [A - IF THE ANSWER TO SUB-QUESTION 4 OF QUESTION 54 IS NOT 1, AND...]
 [A - IF THE ANSWER TO SUB-QUESTION 5 OF QUESTION 54 IS NOT 1, AND...]
 [A - IF THE ANSWER TO SUB-QUESTION 6 OF QUESTION 54 IS NOT 1, AND...]
 [A - IF THE ANSWER TO SUB-QUESTION 7 OF QUESTION 54 IS NOT 1, AND...]

[A - IF THE ANSWER TO SUB-QUESTION 8 OF QUESTION 54 IS NOT 1, THEN SKIP TO QUESTION 61]

Q.56 How did you become **AWARE OF THE DISCRIMINATION** against your company in the **PRIVATE SECTOR**? **SELECT ALL THAT APPLY!**

[REQUIRE ANSWER]

	Yes	No	Don't Know
Verbal comment	1	2	3 (8594)
Written statement/documents	1	2	3 (8595)
Action taken against the company	1	2	3 (8596)
Don't know/Refused	1	2	3 (8597)
Other action (Specify how you became aware of discrimination against your company)	1	2	3 (8598)

[A - IF THE ANSWER TO SUB-QUESTION 5 OF QUESTION 56 IS NOT 1, THEN SKIP TO QUESTION 58]

Q.57 Specify **Other**: WAY YOU BECAME AWARE OF PRIVATE SECTOR DISCRIMINATION

[REQUIRE ANSWER]

_____ (8599-9098)

Q.58 Which of the following do you consider the **PRIMARY REASON** for your company **BEING DISCRIMINATED AGAINST** in the **PRIVATE SECTOR**?

[REQUIRE ANSWER]

- (9099)
- Owner's race or ethnicity 1
 - Owner's gender 2
 - Both race and gender 3
 - Don't know/Refused 4
 - Other reason (Specify the reason you believe your company was discriminated against) 5

[S - IF THE ANSWER IS NOT 5, THEN SKIP TO QUESTION 60]

Q.59 Specify **Other**: REASON WHY YOU BELIEVE YOUR COMPANY WAS DISCRIMINATED AGAINST (Private Sector)

[REQUIRE ANSWER]

_____ (9100-9599)

Q.60 Please **BRIEFLY** describe the **DISCRIMINATION** you experienced.

[REQUIRE ANSWER]

_____ (9600-10099)

Q.61 CREDIT ACCESS

Has **CREDIT AVAILABILITY** been a financial challenge in the last 12 months?

[REQUIRE ANSWER]

- (10100)
- Yes 1
 - No 2
 - Don't know. 3

Q.62 Has your company **APPLIED FOR CREDIT** in the last 12 months?

[REQUIRE ANSWER]

(10101)
Yes 1
No 2
Don't Know 3

[S - IF THE ANSWER IS 1, THEN SKIP TO QUESTION 67]
[S - IF THE ANSWER IS 2, THEN SKIP TO QUESTION 63]
[S - IF THE ANSWER IS 3, THEN SKIP TO QUESTION 73]

Q.63 What was your primary reason for **NOT APPLYING FOR CREDIT**?

[REQUIRE ANSWER]

(10102)
Have sufficient financing (Have enough funding - don't need additional money) 1
Debt averse (Do not like being in debt) 2
Credit cost too high (Interest rates are too high) 3
Discouraged from applying (because more than likely credit app. would be denied) ... 4
Don't Know/Refused 5
Other (Please specify) 6

[S - IF THE ANSWER IS 1-3 OR 5, THEN SKIP TO QUESTION 73]
[S - IF THE ANSWER IS 4, THEN SKIP TO QUESTION 65]
[S - IF THE ANSWER IS 6, THEN SKIP TO QUESTION 64]

Q.64 Specify **Other Reason**: WHY YOUR COMPANY DID NOT APPLY FOR CREDIT

[REQUIRE ANSWER]

_____ (10103-10602)

[D - IF THE ANSWER TO QUESTION 63 IS NOT 4, THEN SKIP TO QUESTION 73]

[A - IF THE ANSWER TO QUESTION 63 IS NOT 4, THEN SKIP TO QUESTION 54]

Q.65 IF DISCOURAGED FROM APPLYING:

What reason(s) did you think might lead to your company's **LOAN BEING DENIED?**

SELECT ALL THAT APPLY!

[REQUIRE ANSWER]

- (10603-10608)
- Insufficient Documentation 1
 - Insufficient Business History 2
 - Confusion about the Process 3
 - Race or Ethnicity of Owner 4
 - Gender of Owner 5
 - Don't Know/Refused 6
 - Other (Please specify) 7

[S - IF THE ANSWER IS NOT 7, THEN SKIP TO QUESTION 73]

Q.66 Specify Other: REASON WHY YOU THOUGHT YOUR LOAN MIGHT BE DENIED

[REQUIRE ANSWER]

_____ (10609-11108)

[A - IF THE ANSWER TO QUESTION 62 IS NOT 1, THEN SKIP TO QUESTION 73]

Q.67 Was your CREDIT APPLICATION APPROVED?

[REQUIRE ANSWER]

- (11109)
- Yes 1
 - No 2
 - Don't Know 3

[S - IF THE ANSWER IS 1, THEN SKIP TO QUESTION 70]

[S - IF THE ANSWER IS 3, THEN SKIP TO QUESTION 73]

Q.68 Why do you think your **CREDIT APPLICATION WAS DENIED?**

SELECT ALL THAT APPLY.

[REQUIRE ANSWER]

- (11110-11115)
- Insufficient Documentation 1
 - Insufficient Business History 2
 - Confusion about the Process 3
 - Race or Ethnicity of Owner 4
 - Gender of Owner 5
 - Don't Know/Refused 6
 - Other (please specify) 7

[S - IF THE ANSWER IS 1-6, THEN SKIP TO QUESTION 73]

Q.69 Specify **Other**: REASON WHY YOU THINK YOUR CREDIT APPLICATION WAS DENIED

[REQUIRE ANSWER]

_____ (11116-11615)

[D - IF THE ANSWER TO QUESTION 68 IS 7, THEN SKIP TO QUESTION 73]

Q.70 What was the **TOTAL CREDIT AMOUNT** you requested? Would you say...

[REQUIRE ANSWER]

- (11616)
- <25K 1
 - \$25K-\$100K 2
 - \$100K-\$250K 3
 - \$250K-\$1M 4
 - >\$1M 5
 - Don't Know/Refused 6

Q.71 Did you receive **ALL OF THE FUNDING** your company requested?

[REQUIRE ANSWER]

- (11617)
- Yes 1
 - No 2
 - Don't know/Refused 3

[S - IF THE ANSWER IS 1 OR 3, THEN SKIP TO QUESTION 73]

Q.72 What was the **APPROXIMATE PERCENTAGE** of your request that your company did receive?

Would you say...

[REQUIRE ANSWER]

(11618)
 Less than 25% 1
 25-50% 2
 50-75% 3
 75-100% 4
 Don't Know/Refused 5

Q.73 Have you experienced or observed a situation in which a **prime contractor/vendor includes minority or woman subcontractors on a bid or proposal to satisfy the "good faith effort" requirements and then DROPS and/or REPLACES the company as a subcontractor after winning the award for no legitimate reason?**

For a:

[REQUIRE ANSWER]

	Yes	No	Don't Know
WSSC Water Project?	1	2	3 (11619)
Non-WSSC Water Project?	1	2	3 (11620)

Q.74 Do you have any other **FEEDBACK** or **INFORMATION** that you would like to share about **WSSC Water, contracting, working with prime firms, working with subcontractors, or the administration of the SLBE (Small Local Business Enterprise) program?**

BE BRIEF. (PROBE)

If respondent has no feedback to offer, enter NONE.

[REQUIRE ANSWER]

_____ (11621-12120)

Q.75 Interviewer Comments

If no additional comments, put #99 in box.

_____ (12121-12620)

Q.76 Procurement Category: **[ANSWER TO Q. 90]**
Type of Business

RECODE BASED UPON ABOVE ONLY! DO NOT CHANGE THE LINE OF BUSINESS!

[REQUIRE ANSWER]

(12621)
Construction 1
Architectural and Engineering Services 2
Professional Services 3
Goods and Services 4
Other 5

Q.77 Telephone Number _____ (12622-12637)
Q.78 Ref Name _____ (12638-12647)
Q.79 Ref # _____ (12648-12652)
Q.80 Company Name _____ (12653-12752)
Q.81 Contact _____ (12753-12782)
Q.82 Contact Title _____ (12783-12807)
Q.83 Street _____ (12808-12857)
Q.84 City _____ (12858-12907)
Q.85 County _____ (12908-12932)
Q.86 State ____ (12933-12934)
Q.87 Zip _____ (12935-12939)
Q.88 Business Ownership _____ (12940-12989)
Q.89 Ethnicity _____ (12990-13014)
Q.90 Business Category _____ (13015-13039)
Q.91 MGT Vendor ID _____ (13040-13049)
Q.92 Interviewer _____ (13050-13053)
Q.93 Date _____ (13054-13062)
Q.94 Time _____ (13063-13068)
Q.95 Duration _____ (13069-13074)
Q.96 Call Result ____ (13075-13076)

Appendix G

G. Vendor Survey Results

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q3-What is your title? * Business Ownership Crosstabulation	Owner	Count	268	42	55	3	85	138	1	592
		% within Q3	41.64%	9.18%	5.57%	0.33%	15.41%	26.89%	0.98%	100.00%
		% within Business Ownership	26.96%	31.46%	16.83%	20.00%	27.17%	21.87%	27.27%	24.90%
	CEO/President	Count	127	28	17	1	47	82	3	305
		% within Q3	41.64%	9.18%	5.57%	0.33%	15.41%	26.89%	0.98%	100.00%
		% within Business Ownership	26.96%	31.46%	16.83%	20.00%	27.17%	21.87%	27.27%	24.90%
	Manager/Financial Officer	Count	59	16	22	1	35	138	6	277
		% within Q3	21.30%	5.78%	7.94%	0.36%	12.64%	49.82%	2.17%	100.00%
		% within Business Ownership	12.53%	17.98%	21.78%	20.00%	20.23%	36.80%	54.55%	22.61%
	Other	Count	17	3	7	0	6	17	1	51
		% within Q3	33.33%	5.88%	13.73%	0.00%	11.76%	33.33%	1.96%	100.00%
		% within Business Ownership	3.61%	3.37%	6.93%	0.00%	3.47%	4.53%	9.09%	4.16%
Total	Count	471	89	101	5	173	375	11	1225	
	% within Q3	38.45%	7.27%	8.24%	0.41%	14.12%	30.61%	0.90%	100.00%	
	% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	

			Business Ownership						Total	
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE		Don't Know
Q5-What is your company's primary line of business? * Business Ownership Crosstabulation	Construction	Count	212	35	71	3	68	248	5	642
		% within Q5	33.02%	5.45%	11.06%	0.47%	10.59%	38.63%	0.78%	100.00%
		% within Business Ownership	45.20%	39.77%	71.72%	60.00%	39.31%	66.13%	45.45%	52.62%
	Professional Services	Count	135	20	9	0	48	20	3	235
		% within Q5	57.45%	8.51%	3.83%	0.00%	20.43%	8.51%	1.28%	100.00%
		% within Business Ownership	28.78%	22.73%	9.09%	0.00%	27.75%	5.33%	27.27%	19.26%
	Goods & Services	Count	106	13	14	1	44	92	1	271
		% within Q5	39.11%	4.80%	5.17%	0.37%	16.24%	33.95%	0.37%	100.00%
		% within Business Ownership	22.60%	14.77%	14.14%	20.00%	25.43%	24.53%	9.09%	22.21%
	Architectural & Engineering	Count	15	20	5	1	12	15	2	70
		% within Q5	21.43%	28.57%	7.14%	1.43%	17.14%	21.43%	2.86%	100.00%
		% within Business Ownership	3.20%	22.73%	5.05%	20.00%	6.94%	4.00%	18.18%	5.74%
	Other	Count	1	0	0	0	1	0	0	2
		% within Q5	50.00%	0.00%	0.00%	0.00%	50.00%	0.00%	0.00%	100.00%
		% within Business Ownership	0.21%	0.00%	0.00%	0.00%	0.58%	0.00%	0.00%	0.16%
Total	Count	469	88	99	5	173	375	11	1220	
	% within Q5	38.44%	7.21%	8.11%	0.41%	14.18%	30.74%	0.90%	100.00%	
	% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	

			Business Ownership					Total	
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Non-MBE		Don't Know
Q11- Is your company at least 51 percent owned, managed, and controlled by a woman or women? * Business Ownership Crosstabulation	Yes	Count	203	35	35	2	173	1	449
		% within Q11	45.21%	7.80%	7.80%	0.45%	38.53%	0.22%	100.00%
		% within Business Ownership	43.10%	39.77%	34.65%	40.00%	31.80%	9.09%	36.80%
	No	Count	268	53	66	3	371	9	770
		% within Q11	34.81%	6.88%	8.57%	0.39%	48.18%	1.17%	100.00%
		% within Business Ownership	56.90%	60.23%	65.35%	60.00%	68.20%	81.82%	63.11%
	Don't Know	Count	0	0	0	0	0	1	1
		% within Q11	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		% within Business Ownership	0.00%	0.00%	0.00%	0.00%	0.00%	9.09%	0.08%
Total		Count	471	88	101	5	544	11	1220
		% within Q11	38.61%	7.21%	8.28%	0.41%	44.59%	0.90%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q12- Is your company at least 51 percent owned, managed, and controlled by one of the following racial or ethnic groups? * Business Ownership Crosstabulation	African American	Count	471	0	0	0	0	0	0	471
		% within Q12	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
		% within Business Ownership	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	38.45%
	Asian American/Pacific Islander	Count	0	89	0	0	0	0	0	89
		% within Q12	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
		% within Business Ownership	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.27%
	Hispanic American or Latino	Count	0	0	101	0	0	0	0	101
		% within Q12	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%
		% within Business Ownership	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	8.24%
	Native American/American Indian	Count	0	0	0	5	0	0	0	5
		% within Q12	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%
		% within Business Ownership	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.41%
	Caucasian/White	Count	0	0	0	0	173	375	0	548
		% within Q12	0.00%	0.00%	0.00%	0.00%	31.57%	68.43%	0.00%	100.00%
		% within Business Ownership	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	0.00%	44.73%
Don't Know	Count	0	0	0	0	0	0	11	11	
	% within Q12	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	
	% within Business Ownership	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.90%	
Total		Count	471	89	101	5	173	375	11	1225
		% within Q12	38.45%	7.27%	8.24%	0.41%	14.12%	30.61%	0.90%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q14- What is the highest level of education completed by the primary owner of your company? * Business Ownership Crosstabulation	Some high school	Count	0	0	2	0	0	1	0	3
		% within Q14	0.00%	0.00%	66.67%	0.00%	0.00%	33.33%	0.00%	100.00%
		% within Business Ownership	0.00%	0.00%	1.98%	0.00%	0.00%	0.27%	0.00%	0.24%
	High school graduate	Count	28	4	12	1	14	19	0	78
		% within Q14	35.90%	5.13%	15.38%	1.28%	17.95%	24.36%	0.00%	100.00%
		% within Business Ownership	5.94%	4.49%	11.88%	20.00%	7.95%	5.11%	0.00%	6.37%
	Trade or technical education	Count	44	0	23	0	4	45	0	116
		% within Q14	37.93%	0.00%	19.83%	0.00%	3.45%	38.79%	0.00%	100.00%
		% within Business Ownership	9.34%	0.00%	22.77%	0.00%	2.27%	12.10%	0.00%	9.47%
	Some college	Count	34	2	4	1	12	25	1	79
		% within Q14	43.04%	2.53%	5.06%	1.27%	15.19%	31.65%	1.27%	100.00%
		% within Business Ownership	7.22%	2.25%	3.96%	20.00%	6.82%	6.72%	9.09%	6.45%
	Associate Degree	Count	40	2	12	1	10	43	1	109
		% within Q14	36.70%	1.83%	11.01%	0.92%	9.17%	39.45%	0.92%	100.00%
		% within Business Ownership	8.49%	2.25%	11.88%	20.00%	5.68%	11.56%	9.09%	8.90%
	Bachelor's Degree	Count	134	14	18	0	56	100	1	323
		% within Q14	41.49%	4.33%	5.57%	0.00%	17.34%	30.96%	0.31%	100.00%
		% within Business Ownership	28.45%	15.73%	17.82%	0.00%	31.82%	26.88%	9.09%	26.37%
	Post graduate degree	Count	191	67	28	1	76	138	5	506
		% within Q14	37.75%	13.24%	5.53%	0.20%	15.02%	27.27%	0.99%	100.00%
		% within Business Ownership	40.55%	75.28%	27.72%	20.00%	43.18%	37.10%	45.45%	41.31%
Don't Know	Count	0	0	2	1	4	1	3	11	
	% within Q14	0.00%	0.00%	18.18%	9.09%	36.36%	9.09%	27.27%	100.00%	
	% within Business Ownership	0.00%	0.00%	1.98%	20.00%	2.27%	0.27%	27.27%	0.90%	
Total	Count	471	89	101	5	176	372	11	1225	
	% within Q14	38.45%	7.27%	8.24%	0.41%	14.37%	30.37%	0.90%	100.00%	
	% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	

			Business Ownership						Total	
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE		Don't Know
Q15- Age of Company * Business Ownership Crosstabulation	0-2 years	Count	15	2	0	0	2	4	0	23
		% within Q15	65.22%	8.70%	0.00%	0.00%	8.70%	17.39%	0.00%	100.00%
		% within Business Ownership	3.18%	2.27%	0.00%	0.00%	1.16%	1.07%	0.00%	1.88%
	3-5 years	Count	61	7	6	0	10	12	0	96
		% within Q15	63.54%	7.29%	6.25%	0.00%	10.42%	12.50%	0.00%	100.00%
		% within Business Ownership	12.95%	7.95%	5.94%	0.00%	5.78%	3.20%	0.00%	7.86%
	6-10 years	Count	101	19	17	0	29	59	0	225
		% within Q15	44.89%	8.44%	7.56%	0.00%	12.89%	26.22%	0.00%	100.00%
		% within Business Ownership	21.44%	21.59%	16.83%	0.00%	16.76%	15.73%	0.00%	18.41%
	11-15 years	Count	116	20	14	2	39	78	0	269
		% within Q15	43.12%	7.43%	5.20%	0.74%	14.50%	29.00%	0.00%	100.00%
		% within Business Ownership	24.63%	22.73%	13.86%	50.00%	22.54%	20.80%	0.00%	22.01%
	16-20 years	Count	67	13	29	1	20	59	2	191
		% within Q15	35.08%	6.81%	15.18%	0.52%	10.47%	30.89%	1.05%	100.00%
		% within Business Ownership	14.23%	14.77%	28.71%	25.00%	11.56%	15.73%	20.00%	15.63%
	21+ years	Count	110	27	35	1	73	163	8	417
		% within Q15	26.38%	6.47%	8.39%	0.24%	17.51%	39.09%	1.92%	100.00%
		% within Business Ownership	23.35%	30.68%	34.65%	25.00%	42.20%	43.47%	80.00%	34.12%
	Don't Know	Count	1	0	0	0	0	0	0	1
		% within Q15	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
		% within Business Ownership	0.21%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.08%
Total	Count	471	88	101	4	173	375	10	1222	
	% within Q15	38.54%	7.20%	8.27%	0.33%	14.16%	30.69%	0.82%	100.00%	
	% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q16- What is the average number of employees on your company's payroll, including full-time and part-time staff? * Business Ownership Crosstabulation	1-5 employees	Count	140	22	12	0	27	47	1	249
		% within Q16	56.22%	8.84%	4.82%	0.00%	10.84%	18.88%	0.40%	100.00%
		% within Business Ownership	40.70%	30.14%	14.81%	0.00%	19.57%	13.20%	11.11%	24.80%
	6-9 employees	Count	61	12	10	0	21	53	0	157
		% within Q16	38.85%	7.64%	6.37%	0.00%	13.38%	33.76%	0.00%	100.00%
		% within Business Ownership	17.73%	16.44%	12.35%	0.00%	15.22%	14.89%	0.00%	15.64%
	10-19 employees	Count	53	15	18	2	48	77	1	214
		% within Q16	24.77%	7.01%	8.41%	0.93%	22.43%	35.98%	0.47%	100.00%
		% within Business Ownership	15.41%	20.55%	22.22%	66.67%	34.78%	21.63%	11.11%	21.31%
	20-49 employees	Count	55	14	26	0	27	93	0	215
		% within Q16	25.58%	6.51%	12.09%	0.00%	12.56%	43.26%	0.00%	100.00%
		% within Business Ownership	15.99%	19.18%	32.10%	0.00%	19.57%	26.12%	0.00%	21.41%
	50-499 employees	Count	29	4	12	1	13	57	2	118
		% within Q16	24.58%	3.39%	10.17%	0.85%	11.02%	48.31%	1.69%	100.00%
		% within Business Ownership	8.43%	5.48%	14.81%	33.33%	9.42%	16.01%	22.22%	11.75%
	500+ employees	Count	2	5	3	0	2	27	5	44
		% within Q16	4.55%	11.36%	6.82%	0.00%	4.55%	61.36%	11.36%	100.00%
		% within Business Ownership	0.58%	6.85%	3.70%	0.00%	1.45%	7.58%	55.56%	4.38%
	Don't Know	Count	4	1	0	0	0	2	0	7
		% within Q16	57.14%	14.29%	0.00%	0.00%	0.00%	28.57%	0.00%	100.00%
		% within Business Ownership	1.16%	1.37%	0.00%	0.00%	0.00%	0.56%	0.00%	0.70%
Total	Count	344	73	81	3	138	356	9	1004	
	% within Q16	34.26%	7.27%	8.07%	0.30%	13.75%	35.46%	0.90%	100.00%	
	% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q17-Which of the following ranges best approximates your company's gross revenues for calendar year 2020? * Business Ownership Crosstabulation	<\$100k	Count	130	15	11	0	25	66	1	248
		% within Q17	52.42%	6.05%	4.44%	0.00%	10.08%	26.61%	0.40%	100.00%
		% within Business Ownership	27.66%	17.05%	10.89%	0.00%	14.45%	17.65%	10.00%	20.33%
	\$100k-\$500k	Count	119	11	19	1	31	56	0	237
		% within Q17	50.21%	4.64%	8.02%	0.42%	13.08%	23.63%	0.00%	100.00%
		% within Business Ownership	25.32%	12.50%	18.81%	25.00%	17.92%	14.97%	0.00%	19.43%
	\$500k-\$1m	Count	86	22	23	1	37	78	0	247
		% within Q17	34.82%	8.91%	9.31%	0.40%	14.98%	31.58%	0.00%	100.00%
		% within Business Ownership	18.30%	25.00%	22.77%	25.00%	21.39%	20.86%	0.00%	20.25%
	\$1m-\$5m	Count	83	16	25	1	49	70	1	245
		% within Q17	33.88%	6.53%	10.20%	0.41%	20.00%	28.57%	0.41%	100.00%
		% within Business Ownership	17.66%	18.18%	24.75%	25.00%	28.32%	18.72%	10.00%	20.08%
	\$5m-\$10m	Count	21	7	6	0	7	31	0	72
		% within Q17	29.17%	9.72%	8.33%	0.00%	9.72%	43.06%	0.00%	100.00%
		% within Business Ownership	4.47%	7.95%	5.94%	0.00%	4.05%	8.29%	0.00%	5.90%
	>\$10m	Count	16	11	11	0	8	53	8	107
		% within Q17	14.95%	10.28%	10.28%	0.00%	7.48%	49.53%	7.48%	100.00%
		% within Business Ownership	3.40%	12.50%	10.89%	0.00%	4.62%	14.17%	80.00%	8.77%
	Don't Know	Count	15	6	6	1	16	20	0	64
		% within Q17	23.44%	9.38%	9.38%	1.56%	25.00%	31.25%	0.00%	100.00%
		% within Business Ownership	3.19%	6.82%	5.94%	25.00%	9.25%	5.35%	0.00%	5.25%
Total	Count	470	88	101	4	173	374	10	1220	
	% within Q17	38.52%	7.21%	8.28%	0.33%	14.18%	30.66%	0.82%	100.00%	
	% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	

			Business Ownership						Total	
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE		Don't Know
Q18a-Does your company hold any of the following certifications from a recognized certification agency? Minority Business Enterprise (MBE) * Business Ownership Crosstabulation	Yes	Count	377	61	50	2	72	13	1	576
		% within Q18a	65.45%	10.59%	8.68%	0.35%	12.50%	2.26%	0.17%	100.00%
		% within Business Ownership	80.21%	69.32%	49.50%	50.00%	42.60%	3.49%	11.11%	47.45%
	No	Count	90	27	49	2	94	360	8	630
		% within Q18a	14.29%	4.29%	7.78%	0.32%	14.92%	57.14%	1.27%	100.00%
		% within Business Ownership	19.15%	30.68%	48.51%	50.00%	55.62%	96.51%	88.89%	51.89%
	Don't Know	Count	3	0	2	0	3	0		8
		% within Q18a	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		% within Business Ownership	0.64%	0.00%	1.98%	0.00%	1.78%	0.00%	0.00%	0.66%
Total		Count	470	88	101	4	169	373	9	1214
		% within Q18a	38.71%	7.25%	8.32%	0.33%	13.92%	30.72%	0.74%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q18b-Does your company hold any of the following certifications from a recognized certification agency? Woman Business Enterprise (WBE) * Business Ownership Crosstabulation	Yes	Count	150	28	17	1	107	12	1	316
		% within Q18b	47.47%	8.86%	5.38%	0.32%	33.86%	3.80%	0.32%	100.00%
		% within Business Ownership	35.38%	33.73%	18.09%	25.00%	61.85%	3.22%	11.11%	27.24%
	No	Count	272	54	76	3	64	361	8	838
		% within Q18b	32.46%	6.44%	9.07%	0.36%	7.64%	43.08%	0.95%	100.00%
		% within Business Ownership	64.15%	65.06%	80.85%	75.00%	36.99%	96.78%	88.89%	72.24%
	Don't Know	Count	2	1	1	0	2	0	0	6
		% within Q18b	33.33%	16.67%	16.67%	0.00%	33.33%	0.00%	0.00%	100.00%
		% within Business Ownership	0.47%	1.20%	1.06%	0.00%	1.16%	0.00%	0.00%	0.52%
Total		Count	424	83	94	4	173	373	9	1160
		% within Q18b	36.55%	7.16%	8.10%	0.34%	14.91%	32.16%	0.78%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q18c-Does your company hold any of the following certifications from a recognized certification agency? Small or Small Local Business Enterprise (SBE/SLBE) * Business Ownership Crosstabulation	Yes	Count	218	35	27	1	46	27	2	356
		% within Q18c	61.24%	9.83%	7.58%	0.28%	12.92%	7.58%	0.56%	100.00%
		% within Business Ownership	48.02%	40.70%	27.55%	25.00%	27.22%	7.22%	22.22%	29.82%
	No	Count	233	51	70	3	119	346	7	829
		% within Q18c	28.11%	6.15%	8.44%	0.36%	14.35%	41.74%	0.84%	100.00%
		% within Business Ownership	51.32%	59.30%	71.43%	75.00%	70.41%	92.51%	77.78%	69.43%
	Don't Know	Count	3	0	1	0	4	1	0	9
		% within Q18c	33.33%	0.00%	11.11%	0.00%	44.44%	11.11%	0.00%	100.00%
		% within Business Ownership	0.66%	0.00%	1.02%	0.00%	2.37%	0.27%	0.00%	0.75%
Total		Count	454	86	98	4	169	374	9	1194
		% within Q18c	38.02%	7.20%	8.21%	0.34%	14.15%	31.32%	0.75%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Q18d-Does your company hold any of the following certifications from a recognized certification agency? Disadvantaged Business Enterprise (DBE) * Business Ownership Crosstabulation										
		Business Ownership							Total	
		African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know		
Q18d-Does your company hold any of the following certifications from a recognized certification agency? Disadvantaged Business Enterprise (DBE) * Business Ownership Crosstabulation	Yes	Count	221	28	24	2	47	16	2	340
		% within Q18d	65.00%	8.24%	7.06%	0.59%	13.82%	4.71%	0.59%	100.00%
		% within Business Ownership	49.22%	32.56%	24.74%	50.00%	27.65%	4.27%	20.00%	28.55%
	No	Count	222	58	71	2	119	359	8	839
		% within Q18d	26.46%	6.91%	8.46%	0.24%	14.18%	42.79%	0.95%	100.00%
		% within Business Ownership	49.44%	67.44%	73.20%	50.00%	70.00%	95.73%	80.00%	70.45%
	Don't Know	Count	6	0	2	0	4	0	0	12
		% within Q18d	50.00%	0.00%	16.67%	0.00%	33.33%	0.00%	0.00%	100.00%
		% within Business Ownership	1.34%	0.00%	2.06%	0.00%	2.35%	0.00%	0.00%	1.01%
	Total		Count	449	86	97	4	170	375	10
% within Q18d			37.70%	7.22%	8.14%	0.34%	14.27%	31.49%	0.84%	100.00%
% within Business Ownership			100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q18e-Does your company hold any of the following certifications from a recognized certification agency? Other * Business Ownership Crosstabulation	Yes	Count	51	4	9	0	12	10	1	87
		% within Q18e	58.62%	4.60%	10.34%	0.00%	13.79%	11.49%	1.15%	100.00%
		% within Business Ownership	13.49%	5.33%	10.34%	0.00%	8.33%	2.76%	10.00%	8.22%
	No	Count	318	70	76	3	130	352	9	958
		% within Q18e	33.19%	7.31%	7.93%	0.31%	13.57%	36.74%	0.94%	100.00%
		% within Business Ownership	84.13%	93.33%	87.36%	100.00%	90.28%	97.24%	90.00%	90.46%
	Don't Know	Count	9	1	2	0	2	0	0	14
		% within Q18e	64.29%	7.14%	14.29%	0.00%	14.29%	0.00%	0.00%	100.00%
		% within Business Ownership	2.38%	1.33%	2.30%	0.00%	1.39%	0.00%	0.00%	1.32%
Total		Count	378	75	87	3	144	362	10	1059
		% within Q18e	35.69%	7.08%	8.22%	0.28%	13.60%	34.18%	0.94%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q20-Have you applied for SLBE approval through WSSC ? * Business Ownership Crosstabulation	Yes	Count	67	11	12	0	28	7	0	125
		% within Q20	53.60%	8.80%	9.60%	0.00%	22.40%	5.60%	0.00%	100.00%
		% within Business Ownership	19.14%	16.92%	13.79%	0.00%	19.58%	2.00%	0.00%	12.40%
	No	Count	199	34	51	3	78	249	7	621
		% within Q20	32.05%	5.48%	8.21%	0.48%	12.56%	40.10%	1.13%	100.00%
		% within Business Ownership	56.86%	52.31%	58.62%	75.00%	54.55%	71.14%	77.78%	61.61%
	Don't Know	Count	84	20	24	1	37	94	2	262
		% within Q20	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		% within Business Ownership	24.00%	30.77%	27.59%	25.00%	25.87%	26.86%	22.22%	25.99%
Total		Count	350	65	87	4	143	350	9	1008
		% within Q20	34.72%	6.45%	8.63%	0.40%	14.19%	34.72%	0.89%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q21a- What are your reasons for not applying for SLBE * Business Ownership Crosstabulation	Application Process Too Burdensome	Count	19	2	6	1	10	16	0	54
		% within Q21a	35.19%	3.70%	11.11%	1.85%	18.52%	29.63%	0.00%	100.00%
		% within Business Ownership	9.69%	6.06%	12.00%	33.33%	12.82%	6.50%	0.00%	8.82%
	Application Process Too Confusing	Count	12	1	3	0	5	9	0	30
		% within Q21a	40.00%	3.33%	10.00%	0.00%	16.67%	30.00%	0.00%	100.00%
		% within Business Ownership	6.12%	3.03%	6.00%	0.00%	6.41%	3.66%	0.00%	4.90%
	I do not feel having the certification would help my business	Count	19	1	1	0	5	8	0	34
		% within Q21a	55.88%	2.94%	2.94%	0.00%	14.71%	23.53%	0.00%	100.00%
		% within Business Ownership	9.69%	3.03%	2.00%	0.00%	6.41%	3.25%	0.00%	5.56%
	I do not think I am eligible for certification	Count	3	0	1	0	1	4	0	9
		% within Q21a	33.33%	0.00%	11.11%	0.00%	11.11%	44.44%	0.00%	100.00%
		% within Business Ownership	1.53%	0.00%	2.00%	0.00%	1.28%	1.63%	0.00%	1.47%
	Not Applicable	Count	82	26	30	2	41	184	6	371
		% within Q21a	22.10%	7.01%	8.09%	0.54%	11.05%	49.60%	1.62%	100.00%
		% within Business Ownership	41.84%	78.79%	60.00%	66.67%	52.56%	74.80%	100.00%	60.62%
Other	Count	61	3	9	0	16	25	0	114	
	% within Q21a	53.51%	2.63%	7.89%	0.00%	14.04%	21.93%	0.00%	100.00%	
	% within Business Ownership	31.12%	9.09%	18.00%	0.00%	20.51%	10.16%	0.00%	18.63%	
Total	Count	196	33	50	3	78	246	6	612	
	% within Q21a	32.03%	5.39%	8.17%	0.49%	12.75%	40.20%	0.98%	100.00%	
	% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q21b-What are your reasons for not applying for SLBE * Business Ownership Crosstabulation	Application Process Too Burdensome	Count	3	0	1	0	3	1	0	8
		% within Q21b	37.50%	0.00%	12.50%	0.00%	37.50%	12.50%	0.00%	100.00%
		% within Business Ownership	1.53%	0.00%	2.00%	0.00%	3.85%	0.41%	0.00%	1.31%
	Application Process Too Confusing	Count	5	1	1	0	4	0	0	11
		% within Q21b	45.45%	9.09%	9.09%	0.00%	36.36%	0.00%	0.00%	100.00%
		% within Business Ownership	2.55%	3.03%	2.00%	0.00%	5.13%	0.00%	0.00%	1.80%
	I do not feel having the certification would help my business	Count	0	0	0	0	2	0	0	2
		% within Q21b	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%
		% within Business Ownership	0.00%	0.00%	0.00%	0.00%	2.56%	0.00%	0.00%	0.00%
	I do not think I am eligible for certification	Count	0	0	0	0	0	0	0	0
		% within Q21b	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		% within Business Ownership	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	Not Applicable	Count	0	0	0	0	0	0	0	0
		% within Q21b	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		% within Business Ownership	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Other	Count	0	0	0	0	0	1	0	1	
	% within Q21b	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
	% within Business Ownership	0.00%	0.00%	0.00%	0.00%	0.00%	0.41%	0.00%	0.16%	
Total		Count	8	1	2	0	9	2	0	22
		% within Q21b	36.36%	4.55%	9.09%	0.00%	40.91%	9.09%	0.00%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	0.00%	100.00%	100.00%	0.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q21c-What are your reasons for not applying for SLBE * Business Ownership Crosstabulation	Application Process Too Burdensome	Count	0	0	0	0	0	0	0	0
		% within Q21c	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		% within Business Ownership	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	Application Process Too Confusing	Count	0	0	0	0	0	0	0	0
		% within Q21c	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		% within Business Ownership	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	I do not feel having the certification would help my business	Count	2	0	0	0	0	1	0	3
		% within Q21c	66.67%	0.00%	0.00%	0.00%	0.00%	33.33%	0.00%	0.00%
		% within Business Ownership	1.02%	0.00%	0.00%	0.00%	0.00%	0.41%	0.00%	0.00%
	I do not think I am eligible for certification	Count	0	0	0	0	0	0	0	0
		% within Q21c	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		% within Business Ownership	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	Not Applicable	Count	0	0	0	0	0	0	0	0
		% within Q21c	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		% within Business Ownership	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	Other	Count	0	0	0	0	0	0	0	0
		% within Q21c	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		% within Business Ownership	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total	Count	2	0	0	0	0	1	0	3	
	% within Q21c	66.67%	0.00%	0.00%	0.00%	0.00%	33.33%	0.00%	100.00%	
	% within Business Ownership	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100.00%	

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q24 Has SLBE Certification Helped * Business Ownership Crosstabulation	Yes	Count	74	15	11	1	27	11	2	141
		% within Q24	52.48%	10.64%	7.80%	0.71%	19.15%	7.80%	1.42%	100.00%
		% within Business Ownership	41.57%	44.12%	55.00%	100.00%	51.92%	40.74%	100.00%	44.90%
	No	Count	100	15	7	0	23	15	0	160
		% within Q24	62.50%	9.38%	4.38%	0.00%	14.38%	9.38%	0.00%	100.00%
		% within Business Ownership	56.18%	44.12%	35.00%	0.00%	44.23%	55.56%	0.00%	50.96%
	Don't Know	Count	4	4	2	0	2	1	0	13
		% within Q24	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		% within Business Ownership	2.25%	11.76%	10.00%	0.00%	3.85%	3.70%	0.00%	4.14%
Total		Count	178	34	20	1	52	27	2	314
		% within Q24	56.69%	10.83%	6.37%	0.32%	16.56%	8.60%	0.64%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American / American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q27-Does your company bid/quote/propose primarily as a prime contractor/consultant or vendor? Subcontractor/supplier? OR both?* Business Ownership Crosstabulation	Prime Contractor/Consultant or Vendor	Count	164	48	40	3	88	213	4	560
		% within Q27	29.29%	8.57%	7.14%	0.54%	15.71%	38.04%	0.71%	100.00%
		% within Business Ownership	47.67%	65.75%	49.38%	100.00%	63.77%	59.83%	44.44%	55.78%
	Subcontractor/subconsultant or Supplier	Count	92	12	26		24	107	2	263
		% within Q27	34.98%	4.56%	9.89%	0.00%	9.13%	40.68%	0.76%	100.00%
		% within Business Ownership	26.74%	16.44%	32.10%	0.00%	17.39%	30.06%	22.22%	26.20%
	Both	Count	88	13	15	0	26	36	3	181
		% within Q27	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		% within Business Ownership	25.58%	17.81%	18.52%	0.00%	18.84%	10.11%	33.33%	18.03%
Total		Count	344	73	81	3	138	356	9	1004
		% within Q27	34.26%	7.27%	8.07%	0.30%	13.75%	35.46%	0.90%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q28-In general, which of the following ranges best approximate your company's largest prime contract awarded between January 1, 2016 and December 31, 2018? * Business Ownership Crosstabulation	None	Count	53	12	6	0	18	28	1	118
		% within Q28	44.92%	10.17%	5.08%	0.00%	15.25%	23.73%	0.85%	100.00%
		% within Business Ownership	16.21%	17.91%	9.52%	0.00%	12.95%	10.11%	12.50%	13.33%
	Up to \$50,000	Count	47	9	1	0	18	15	0	90
		% within Q28	52.22%	10.00%	1.11%	0.00%	20.00%	16.67%	0.00%	100.00%
		% within Business Ownership	14.37%	13.43%	1.59%	0.00%	12.95%	5.42%	0.00%	10.17%
	\$50,001 to \$100,000	Count	24	1	3	0	8	8	0	44
		% within Q28	54.55%	2.27%	6.82%	0.00%	18.18%	18.18%	0.00%	100.00%
		% within Business Ownership	7.34%	1.49%	4.76%	0.00%	5.76%	2.89%	0.00%	4.97%
	\$100,001 to \$200,000	Count	16	2	0	0	8	10	0	36
		% within Q28	44.44%	5.56%	0.00%	0.00%	22.22%	27.78%	0.00%	100.00%
		% within Business Ownership	4.89%	2.99%	0.00%	0.00%	5.76%	3.61%	0.00%	4.07%
	\$200,001 to \$300,000	Count	15	1	4	0	11	8	0	39
		% within Q28	38.46%	2.56%	10.26%	0.00%	28.21%	20.51%	0.00%	100.00%
		% within Business Ownership	4.59%	1.49%	6.35%	0.00%	7.91%	2.89%	0.00%	4.41%
	\$300,001 to \$400,000	Count	16	3	3	1	10	22	1	56
		% within Q28	28.57%	5.36%	5.36%	1.79%	17.86%	39.29%	1.79%	100.00%
		% within Business Ownership	4.89%	4.48%	4.76%	25.00%	7.19%	7.94%	12.50%	6.33%

		Business Ownership								
		African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	Total	
	\$400,001 to \$500,000	Count	19	6	6	0	5	16	0	52
		% within Q28	36.54%	11.54%	11.54%	0.00%	9.62%	30.77%	0.00%	100.00%
		% within Business Ownership	5.81%	8.96%	9.52%	0.00%	3.60%	5.78%	0.00%	5.88%
	\$500,001 to \$1 million	Count	46	10	16	1	15	54	0	142
		% within Q28	32.39%	7.04%	11.27%	0.70%	10.56%	38.03%	0.00%	100.00%
		% within Business Ownership	14.07%	14.93%	25.40%	25.00%	10.79%	19.49%	0.00%	16.05%
	Over \$1 million	Count	79	20	23	2	33	98	6	261
		% within Q28	30.27%	7.66%	8.81%	0.77%	12.64%	37.55%	2.30%	100.00%
		% within Business Ownership	24.16%	29.85%	36.51%	50.00%	23.74%	35.38%	75.00%	29.49%
Don't Know	Count	12	3	1	0	13	18	0	47	
	% within Q28	25.53%	6.38%	2.13%	0.00%	27.66%	38.30%	0.00%	100.00%	
	% within Business Ownership	3.67%	4.48%	1.59%	0.00%	9.35%	6.50%	0.00%	5.31%	
Total	Count	327	67	63	4	139	277	8	885	
	% within Q28	36.95%	7.57%	7.12%	0.45%	15.71%	31.30%	0.90%	100.00%	
	% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	

			Business Ownership							Total
			African American	Asian American/ Pacific Islander	Hispanic American or Latino	Native American/ American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q29a- In your experience, have any of the following been a barrier to attempting to do work or while working on WSSC Water projects as a prime contractor/vendor? Prequalification requirements * Business Ownership Crosstabulation	Yes	Count	51	5	2	1	6	8	0	73
		% within Q29a	69.86%	6.85%	2.74%	1.37%	8.22%	10.96%	0.00%	100.00%
		% within Business Ownership	15.60%	7.46%	3.17%	25.00%	4.32%	3.05%	0.00%	8.39%
	No	Count	246	62	58	3	124	254	8	755
		% within Q29a	32.58%	8.21%	7.68%	0.40%	16.42%	33.64%	1.06%	100.00%
		% within Business Ownership	75.23%	92.54%	92.06%	75.00%	89.21%	96.95%	100.00%	86.78%
	Not Applicable	Count	30	0	3	0	9	0	0	42
		% within Q29a	71.43%	0.00%	7.14%	0.00%	21.43%	0.00%	0.00%	100.00%
		% within Business Ownership	9.17%	0.00%	4.76%	0.00%	6.47%	0.00%	0.00%	4.83%
Total		Count	327	67	63	4	139	262	8	870
		% within Q29a	37.59%	7.70%	7.24%	0.46%	15.98%	30.11%	0.92%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q29b- In your experience, have any of the following been a barrier to attempting to do work or while working on WSSC Water projects as a prime contractor/vendor? Visibility of Solicitations/Opportunities * Business Ownership Crosstabulation	Yes	Count	74	8	5	1	19	9	0	116
		% within Q29b	63.79%	6.90%	4.31%	0.86%	16.38%	7.76%	0.00%	100.00%
		% within Business Ownership	22.63%	11.94%	7.94%	25.00%	13.67%	3.44%	0.00%	13.33%
	No	Count	236	59	56	3	114	252	8	728
		% within Q29b	32.42%	8.10%	7.69%	0.41%	15.66%	34.62%	1.10%	100.00%
		% within Business Ownership	72.17%	88.06%	88.89%	75.00%	82.01%	96.18%	100.00%	83.68%
	Not Applicable	Count	17	0	2	0	6	1	0	26
		% within Q29b	65.38%	0.00%	7.69%	0.00%	23.08%	3.85%	0.00%	100.00%
		% within Business Ownership	5.20%	0.00%	3.17%	0.00%	4.32%	0.38%	0.00%	2.99%
Total		Count	327	67	63	4	139	262	8	870
		% within Q29b	37.59%	7.70%	7.24%	0.46%	15.98%	30.11%	0.92%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q29c- In your experience, have any of the following been a barrier to attempting to do work or while working on WSSC Water projects as a prime contractor/vendor? Bond Requirements * Business Ownership Crosstabulation	Yes	Count	34	2	2	1	2	2	0	43
		% within Q29c	79.07%	4.65%	4.65%	2.33%	4.65%	4.65%	0.00%	100.00%
		% within Business Ownership	10.40%	2.99%	3.17%	25.00%	1.44%	0.76%	0.00%	4.94%
	No	Count	260	63	58	3	126	258	8	776
		% within Q29c	33.51%	8.12%	7.47%	0.39%	16.24%	33.25%	1.03%	100.00%
		% within Business Ownership	79.51%	94.03%	92.06%	75.00%	90.65%	98.47%	100.00%	89.20%
	Not Applicable	Count	33	2	3	0	11	2	0	51
		% within Q29c	64.71%	3.92%	5.88%	0.00%	21.57%	3.92%	0.00%	100.00%
		% within Business Ownership	10.09%	2.99%	4.76%	0.00%	7.91%	0.76%	0.00%	5.86%
Total		Count	327	67	63	4	139	262	8	870
		% within Q29c	37.59%	7.70%	7.24%	0.46%	15.98%	30.11%	0.92%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q29d- In your experience, have any of the following been a barrier to attempting to do work or while working on WSSC Water projects as a prime contractor/vendor? Proposal/Bid Specifications * Business Ownership Crosstabulation	Yes	Count	41	4	3	1	7	3	0	59
		% within Q29d	69.49%	6.78%	5.08%	1.69%	11.86%	5.08%	0.00%	100.00%
		% within Business Ownership	12.54%	5.97%	4.76%	25.00%	5.04%	1.15%	0.00%	6.78%
	No	Count	264	63	58	3	123	257	8	776
		% within Q29d	34.02%	8.12%	7.47%	0.39%	15.85%	33.12%	1.03%	100.00%
		% within Business Ownership	80.73%	94.03%	92.06%	75.00%	88.49%	98.09%	100.00%	89.20%
	Not Applicable	Count	22	0	2	0	9	2	0	35
		% within Q29d	62.86%	0.00%	5.71%	0.00%	25.71%	5.71%	0.00%	100.00%
		% within Business Ownership	6.73%	0.00%	3.17%	0.00%	6.47%	0.76%	0.00%	4.02%
Total		Count	327	67	63	4	139	262	8	870
		% within Q29d	37.59%	7.70%	7.24%	0.46%	15.98%	30.11%	0.92%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q29e- In your experience, have any of the following been a barrier to attempting to do work or while working on WSSC Water projects as a prime contractor/vendor? Limited time given to prepare bid. * Business Ownership Crosstabulation	Yes	Count	44	4	3	1	4	2	1	59
		% within Q29e	74.58%	6.78%	5.08%	1.69%	6.78%	3.39%	1.69%	100.00%
		% within Business Ownership	13.46%	5.97%	4.76%	25.00%	2.88%	0.76%	12.50%	6.78%
	No	Count	262	62	58	3	128	258	7	778
		% within Q29e	33.68%	7.97%	7.46%	0.39%	16.45%	33.16%	0.90%	100.00%
		% within Business Ownership	80.12%	92.54%	92.06%	75.00%	92.09%	98.47%	87.50%	89.43%
	Not Applicable	Count	21	1	2	0	7	2	0	33
		% within Q29e	63.64%	3.03%	6.06%	0.00%	21.21%	6.06%	0.00%	100.00%
		% within Business Ownership	6.42%	1.49%	3.17%	0.00%	5.04%	0.76%	0.00%	3.79%
Total		Count	327	67	63	4	139	262	8	870
		% within Q29e	37.59%	7.70%	7.24%	0.46%	15.98%	30.11%	0.92%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership						Total	
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE		Don't Know
Q29f- In your experience, have any of the following been a barrier to attempting to do work or while working on WSSC Water projects as a prime contractor/vendor? Unnecessarily restrictive contract specifications. * Business Ownership Crosstabulation	Yes	Count	34	4	3	1	6	1	0	49
		% within Q29f	69.39%	8.16%	6.12%	2.04%	12.24%	2.04%	0.00%	100.00%
		% within Business Ownership	10.40%	5.97%	4.76%	25.00%	4.32%	0.38%	0.00%	5.63%
	No	Count	268	63	57	3	127	259	8	785
		% within Q29f	34.14%	8.03%	7.26%	0.38%	16.18%	32.99%	1.02%	100.00%
		% within Business Ownership	81.96%	94.03%	90.48%	75.00%	91.37%	98.85%	100.00%	90.23%
	Not Applicable	Count	25	0	3	0	6	2	0	36
		% within Q29f	69.44%	0.00%	8.33%	0.00%	16.67%	5.56%	0.00%	100.00%
		% within Business Ownership	7.65%	0.00%	4.76%	0.00%	4.32%	0.76%	0.00%	4.14%
Total		Count	327	67	63	4	139	262	8	870
		% within Q29f	37.59%	7.70%	7.24%	0.46%	15.98%	30.11%	0.92%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership						Total	
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE		Don't Know
Q29g- In your experience, have any of the following been a barrier to attempting to do work or while working on WSSC Water projects as a prime contractor/vendor? Prequalification requirements * Business Ownership Crosstabulation	Yes	Count	15	3	1	1	2	4	0	26
		% within Q29g	57.69%	11.54%	3.85%	3.85%	7.69%	15.38%	0.00%	100.00%
		% within Business Ownership	4.59%	4.48%	1.59%	25.00%	1.44%	1.53%	0.00%	2.99%
	No	Count	287	64	59	3	131	257	8	809
		% within Q29g	35.48%	7.91%	7.29%	0.37%	16.19%	31.77%	0.99%	100.00%
		% within Business Ownership	87.77%	95.52%	93.65%	75.00%	94.24%	98.09%	100.00%	92.99%
	Not Applicable	Count	25	0	3	0	6	1	0	35
		% within Q29g	71.43%	0.00%	8.57%	0.00%	17.14%	2.86%	0.00%	100.00%
		% within Business Ownership	7.65%	0.00%	4.76%	0.00%	4.32%	0.38%	0.00%	4.02%
Total		Count	327	67	63	4	139	262	8	870
		% within Q29g	37.59%	7.70%	7.24%	0.46%	15.98%	30.11%	0.92%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q29h- In your experience, have any of the following been a barrier to attempting to do work or while working on WSSC Water projects as a prime contractor/vendor? Identifying MBE/SLBE Firms * Business Ownership Crosstabulation	Yes	Count	19	2	2	0	1	3	0	27
		% within Q29h	70.37%	7.41%	7.41%	0.00%	3.70%	11.11%	0.00%	100.00%
		% within Business Ownership	5.81%	2.99%	3.17%	0.00%	0.72%	1.15%	0.00%	3.10%
	No	Count	283	65	58	4	131	258	8	807
		% within Q29h	35.07%	8.05%	7.19%	0.50%	16.23%	31.97%	0.99%	100.00%
		% within Business Ownership	86.54%	97.01%	92.06%	100.00%	94.24%	98.47%	100.00%	92.76%
	Not Applicable	Count	25	0	3	0	7	1	0	36
		% within Q29h	69.44%	0.00%	8.33%	0.00%	19.44%	2.78%	0.00%	100.00%
		% within Business Ownership	7.65%	0.00%	4.76%	0.00%	5.04%	0.38%	0.00%	4.14%
Total		Count	327	67	63	4	139	262	8	870
		% within Q29h	37.59%	7.70%	7.24%	0.46%	15.98%	30.11%	0.92%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q29i- In your experience, have any of the following been a barrier to attempting to do work or while working on WSSC Water projects as a prime contractor/vendor? Selection Process * Business Ownership Crosstabulation	Yes	Count	39	5	2	1	1	2	0	50
		% within Q29i	78.00%	10.00%	4.00%	2.00%	2.00%	4.00%	0.00%	100.00%
		% within Business Ownership	11.93%	7.46%	3.17%	25.00%	0.72%	0.76%	0.00%	5.75%
	No	Count	266	62	58	3	131	259	8	787
		% within Q29i	33.80%	7.88%	7.37%	0.38%	16.65%	32.91%	1.02%	100.00%
		% within Business Ownership	81.35%	92.54%	92.06%	75.00%	94.24%	98.85%	100.00%	90.46%
	Not Applicable	Count	22	0	3	0	7	1	0	33
		% within Q29i	66.67%	0.00%	9.09%	0.00%	21.21%	3.03%	0.00%	100.00%
		% within Business Ownership	6.73%	0.00%	4.76%	0.00%	5.04%	0.38%	0.00%	3.79%
Total		Count	327	67	63	4	139	262	8	870
		% within Q29i	37.59%	7.70%	7.24%	0.46%	15.98%	30.11%	0.92%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q29j- In your experience, have any of the following been a barrier to attempting to do work or while working on WSSC Water projects as a prime contractor/vendor? Insurance Requirements * Business Ownership Crosstabulation	Yes	Count	14	1	0	1	2	0	0	18
		% within Q29j	77.78%	5.56%	0.00%	5.56%	11.11%	0.00%	0.00%	100.00%
		% within Business Ownership	4.28%	1.49%	0.00%	25.00%	1.44%	0.00%	0.00%	2.07%
	No	Count	291	66	61	3	131	262	8	822
		% within Q29j	35.40%	8.03%	7.42%	0.36%	15.94%	31.87%	0.97%	100.00%
		% within Business Ownership	88.99%	98.51%	96.83%	75.00%	94.24%	100.00%	100.00%	94.48%
	Not Applicable	Count	22	0	2	0	6	0	0	30
		% within Q29j	73.33%	0.00%	6.67%	0.00%	20.00%	0.00%	0.00%	100.00%
		% within Business Ownership	6.73%	0.00%	3.17%	0.00%	4.32%	0.00%	0.00%	3.45%
Total		Count	327	67	63	4	139	262	8	870
		% within Q29j	37.59%	7.70%	7.24%	0.46%	15.98%	30.11%	0.92%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q29k- In your experience, have any of the following been a barrier to attempting to do work or while working on WSSC Water projects as a prime contractor/vendor? Cost of Bidding * Business Ownership Crosstabulation	Yes	Count	21	5	1	1	4	0	0	32
		% within Q29k	65.63%	15.63%	3.13%	3.13%	12.50%	0.00%	0.00%	100.00%
		% within Business Ownership	6.42%	7.46%	1.59%	25.00%	2.88%	0.00%	0.00%	3.68%
	No	Count	283	62	60	3	129	260	8	805
		% within Q29k	35.16%	7.70%	7.45%	0.37%	16.02%	32.30%	0.99%	100.00%
		% within Business Ownership	86.54%	92.54%	95.24%	75.00%	92.81%	99.62%	100.00%	92.64%
	Not Applicable	Count	23	0	2	0	6	1	0	32
		% within Q29k	71.88%	0.00%	6.25%	0.00%	18.75%	3.13%	0.00%	100.00%
		% within Business Ownership	7.03%	0.00%	3.17%	0.00%	4.32%	0.38%	0.00%	3.68%
Total		Count	327	67	63	4	139	261	8	869
		% within Q29k	37.63%	7.71%	7.25%	0.46%	16.00%	30.03%	0.92%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q29I- In your experience, have any of the following been a barrier to attempting to do work or while working on WSSC Water projects as a prime contractor/vendor? Cost of Supplies * Business Ownership Crosstabulation	Yes	Count	16	3	1	0	1	0	0	21
		% within Q29I	76.19%	14.29%	4.76%	0.00%	4.76%	0.00%	0.00%	100.00%
		% within Business Ownership	4.89%	4.48%	1.59%	0.00%	0.72%	0.00%	0.00%	2.42%
	No	Count	288	64	59	4	131	255	8	809
		% within Q29I	35.60%	7.91%	7.29%	0.49%	16.19%	31.52%	0.99%	100.00%
		% within Business Ownership	88.07%	95.52%	93.65%	100.00%	94.24%	98.84%	100.00%	93.42%
	Not Applicable	Count	23	0	3	0	7	3	0	36
		% within Q29I	63.89%	0.00%	8.33%	0.00%	19.44%	8.33%	0.00%	100.00%
		% within Business Ownership	7.03%	0.00%	4.76%	0.00%	5.04%	1.16%	0.00%	4.16%
Total		Count	327	67	63	4	139	258	8	866
		% within Q29I	37.76%	7.74%	7.27%	0.46%	16.05%	29.79%	0.92%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q29m- In your experience, have any of the following been a barrier to attempting to do work or while working on WSSC Water projects as a prime contractor/vendor? Competing with Large companies * Business Ownership Crosstabulation	Yes	Count	89	9	7	1	16	8	0	130
		% within Q29m	68.46%	6.92%	5.38%	0.77%	12.31%	6.15%	0.00%	100.00%
		% within Business Ownership	27.22%	13.43%	11.11%	25.00%	11.51%	3.05%	0.00%	14.94%
	No	Count	218	58	54	3	117	254	8	712
		% within Q29m	30.62%	8.15%	7.58%	0.42%	16.43%	35.67%	1.12%	100.00%
		% within Business Ownership	66.67%	86.57%	85.71%	75.00%	84.17%	96.95%	100.00%	81.84%
	Not Applicable	Count	20	0	2	0	6	0	0	28
		% within Q29m	71.43%	0.00%	7.14%	0.00%	21.43%	0.00%	0.00%	100.00%
		% within Business Ownership	6.12%	0.00%	3.17%	0.00%	4.32%	0.00%	0.00%	3.22%
Total		Count	327	67	63	4	139	262	8	870
		% within Q29m	37.59%	7.70%	7.24%	0.46%	15.98%	30.11%	0.92%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q29n- In your experience, have any of the following been a barrier to attempting to do work or while working on WSSC Water projects as a prime contractor/vendor? Financing * Business Ownership Crosstabulation	Yes	Count	33	4	1	1	3	0	0	42
		% within Q29n	78.57%	9.52%	2.38%	2.38%	7.14%	0.00%	0.00%	100.00%
		% within Business Ownership	10.09%	5.97%	1.59%	25.00%	2.16%	0.00%	0.00%	4.83%
	No	Count	273	63	60	3	129	261	8	797
		% within Q29n	34.25%	7.90%	7.53%	0.38%	16.19%	32.75%	1.00%	100.00%
		% within Business Ownership	83.49%	94.03%	95.24%	75.00%	92.81%	99.62%	100.00%	91.61%
	Not Applicable	Count	21	0	2	0	7	1	0	31
		% within Q29n	67.74%	0.00%	6.45%	0.00%	22.58%	3.23%	0.00%	100.00%
		% within Business Ownership	6.42%	0.00%	3.17%	0.00%	5.04%	0.38%	0.00%	3.56%
Total		Count	327	67	63	4	139	262	8	870
		% within Q29n	37.59%	7.70%	7.24%	0.46%	15.98%	30.11%	0.92%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q29o- In your experience, have any of the following been a barrier to attempting to do work or while working on WSSC Water projects as a prime contractor/vendor? Lack of Experience * Business Ownership Crosstabulation	Yes	Count	29	3	2	0	3	0	0	37
		% within Q29o	78.38%	8.11%	5.41%	0.00%	8.11%	0.00%	0.00%	100.00%
		% within Business Ownership	8.87%	4.48%	3.17%	0.00%	2.16%	0.00%	0.00%	4.25%
	No	Count	276	64	59	4	130	262	8	803
		% within Q29o	34.37%	7.97%	7.35%	0.50%	16.19%	32.63%	1.00%	100.00%
		% within Business Ownership	84.40%	95.52%	93.65%	100.00%	93.53%	100.00%	100.00%	92.30%
	Not Applicable	Count	22	0	2	0	6	0	0	30
		% within Q29o	73.33%	0.00%	6.67%	0.00%	20.00%	0.00%	0.00%	100.00%
		% within Business Ownership	6.73%	0.00%	3.17%	0.00%	4.32%	0.00%	0.00%	3.45%
Total		Count	327	67	63	4	139	262	8	870
		% within Q29o	37.59%	7.70%	7.24%	0.46%	15.98%	30.11%	0.92%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q29p- In your experience, have any of the following been a barrier to attempting to do work or while working on WSSC Water projects as a prime contractor/vendor? Contract too large * Business Ownership Crosstabulation	Yes	Count	38	3	2	1	9	2	0	55
		% within Q29p	69.09%	5.45%	3.64%	1.82%	16.36%	3.64%	0.00%	100.00%
		% within Business Ownership	11.62%	4.48%	3.17%	25.00%	6.47%	0.76%	0.00%	6.32%
	No	Count	265	64	59	3	124	260	8	783
		% within Q29p	33.84%	8.17%	7.54%	0.38%	15.84%	33.21%	1.02%	100.00%
		% within Business Ownership	81.04%	95.52%	93.65%	75.00%	89.21%	99.24%	100.00%	90.00%
	Not Applicable	Count	24	0	2	0	6	0	0	32
		% within Q29p	75.00%	0.00%	6.25%	0.00%	18.75%	0.00%	0.00%	100.00%
		% within Business Ownership	7.34%	0.00%	3.17%	0.00%	4.32%	0.00%	0.00%	3.68%
Total		Count	327	67	63	4	139	262	8	870
		% within Q29p	37.59%	7.70%	7.24%	0.46%	15.98%	30.11%	0.92%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q29q- In your experience, have any of the following been a barrier to attempting to do work or while working on WSSC Water projects as a prime contractor/vendor? Informal Network/Good 'ole Boy network * Business Ownership Crosstabulation	Yes	Count	67	9	6	1	10	13	0	106
		% within Q29q	63.21%	8.49%	5.66%	0.94%	9.43%	12.26%	0.00%	100.00%
		% within Business Ownership	20.49%	13.43%	9.52%	25.00%	7.19%	3.24%	0.00%	10.51%
	No	Count	237	58	55	3	123	381	8	865
		% within Q29q	27.40%	6.71%	6.36%	0.35%	14.22%	44.05%	0.92%	100.00%
		% within Business Ownership	72.48%	86.57%	87.30%	75.00%	88.49%	95.01%	100.00%	85.73%
	Not Applicable	Count	23	0	2	0	6	7	0	38
		% within Q29q	60.53%	0.00%	5.26%	0.00%	15.79%	18.42%	0.00%	100.00%
		% within Business Ownership	7.03%	0.00%	3.17%	0.00%	4.32%	1.75%	0.00%	3.77%
Total		Count	327	67	63	4	139	401	8	1009
		% within Q29q	32.41%	6.64%	6.24%	0.40%	13.78%	39.74%	0.79%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q29r- In your experience, have any of the following been a barrier to attempting to do work or while working on WSSC Water projects as a prime contractor/vendor? Changes in Work Scope after beginning * Business Ownership Crosstabulation	Yes	Count	15	1	1	0	6	1		24
		% within Q29r	62.50%	4.17%	4.17%	0.00%	25.00%	4.17%	0.00%	100.00%
		% within Business Ownership	4.59%	1.49%	1.59%	0.00%	4.32%	0.38%	0.00%	2.76%
	No	Count	278	65	59	4	125	261	8	800
		% within Q29r	34.75%	8.13%	7.38%	0.50%	15.63%	32.63%	1.00%	100.00%
		% within Business Ownership	85.02%	97.01%	93.65%	100.00%	89.93%	99.62%	100.00%	91.95%
	Not Applicable	Count	34	1	3	0	8	0	0	46
		% within Q29r	73.91%	2.17%	6.52%	0.00%	17.39%	0.00%	0.00%	100.00%
		% within Business Ownership	10.40%	1.49%	4.76%	0.00%	5.76%	0.00%	0.00%	5.29%
Total		Count	327	67	63	4	139	262	8	870
		% within Q29r	37.59%	7.70%	7.24%	0.46%	15.98%	30.11%	0.92%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q29s- In your experience, have any of the following been a barrier to attempting to do work or while working on WSSC Water projects as a prime contractor/vendor? Slow Payment * Business Ownership Crosstabulation	Yes	Count	15	2	2	2	4	3	1	29
		% within Q29s	51.72%	6.90%	6.90%	6.90%	13.79%	10.34%	3.45%	100.00%
		% within Business Ownership	4.59%	2.99%	3.17%	50.00%	2.88%	1.15%	12.50%	3.33%
	No	Count	280	64	59	2	126	259	7	797
		% within Q29s	35.13%	8.03%	7.40%	0.25%	15.81%	32.50%	0.88%	100.00%
		% within Business Ownership	85.63%	95.52%	93.65%	50.00%	90.65%	98.85%	87.50%	91.61%
	Not Applicable	Count	32	1	2	0	9	0	0	44
		% within Q29s	72.73%	2.27%	4.55%	0.00%	20.45%	0.00%	0.00%	100.00%
		% within Business Ownership	9.79%	1.49%	3.17%	0.00%	6.47%	0.00%	0.00%	5.06%
Total		Count	327	67	63	4	139	262	8	870
		% within Q29s	37.59%	7.70%	7.24%	0.46%	15.98%	30.11%	0.92%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q30- As a prime contractor/vendor are you required to have bonding? * Business Ownership Crosstabulation	Yes	Count	123	31	40	2	46	168	2	412
		% within Q30	29.85%	7.52%	9.71%	0.49%	11.17%	40.78%	0.49%	100.00%
		% within Business Ownership	37.73%	46.27%	64.52%	50.00%	33.09%	64.12%	25.00%	47.47%
	No	Count	158	32	17	1	78	88	4	378
		% within Q30	41.80%	8.47%	4.50%	0.26%	20.63%	23.28%	1.06%	100.00%
		% within Business Ownership	48.47%	47.76%	27.42%	25.00%	56.12%	33.59%	50.00%	43.55%
	Don't Know	Count	45	4	5	1	15	6	2	78
		% within Q30	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		% within Business Ownership	13.80%	5.97%	8.06%	25.00%	10.79%	2.29%	25.00%	8.99%
Total		Count	326	67	62	4	139	262	8	868
		% within Q30	37.56%	7.72%	7.14%	0.46%	16.01%	30.18%	0.92%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q31-Prime what is your current aggregate bonding capacity? * Business Ownership Crosstabulation	<\$100k	Count	6	2	1	0	0	1	0	10
		% within Q31	60.00%	20.00%	10.00%	0.00%	0.00%	10.00%	0.00%	100.00%
		% within Business ownership	4.88%	6.45%	2.50%	0.00%	0.00%	0.60%	0.00%	2.43%
	\$100k-\$250k	Count	2	0	1	0	1	2	0	6
		% within Q31	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		% within Business Ownership	1.63%	0.00%	2.50%	0.00%	2.17%	1.19%	0.00%	1.46%
	\$250k-\$500k	Count	8	0	1	0	3	3	0	15
		% within Q31	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		% within Business Ownership	6.50%	0.00%	2.50%	0.00%	6.52%	1.79%	0.00%	3.64%
	\$500k-\$1m	Count	32	8	8	0	15	54	0	117
		% within Q31	27.35%	6.84%	6.84%	0.00%	12.82%	46.15%	0.00%	100.00%
		% within Business Ownership	26.02%	25.81%	20.00%	0.00%	32.61%	32.14%	0.00%	28.40%
	\$1m-\$1.5m	Count	25	4	6	0	5	21	0	61
		% within Q31	40.98%	6.56%	9.84%	0.00%	8.20%	34.43%	0.00%	100.00%
		% within Business Ownership	20.33%	12.90%	15.00%	0.00%	10.87%	12.50%	0.00%	14.81%
	\$1.5m-\$3m	Count	12	4	6	0	3	16	0	41
		% within Q31	29.27%	9.76%	14.63%	0.00%	7.32%	39.02%	0.00%	100.00%
		% within Business Ownership	9.76%	12.90%	15.00%	0.00%	6.52%	9.52%	0.00%	9.95%
	\$3m-\$5m	Count	8	1	2	1	3	5	0	20
		% within Q31	40.00%	5.00%	10.00%	5.00%	15.00%	25.00%	0.00%	100.00%
		% within Business Ownership	6.50%	3.23%	5.00%	50.00%	6.52%	2.98%	0.00%	4.85%
	>\$5m	Count	20	9	12	1	12	58	1	113
		% within Q31	17.70%	7.96%	10.62%	0.88%	10.62%	51.33%	0.88%	100.00%
		% within Business Ownership	16.26%	29.03%	30.00%	50.00%	26.09%	34.52%	50.00%	27.43%
Don't Know	Count	10	3	3	0	4	8	1	29	
	% within Q31	34.48%	10.34%	10.34%	0.00%	13.79%	27.59%	3.45%	100.00%	
	% within Business Ownership	8.13%	9.68%	7.50%	0.00%	8.70%	4.76%	50.00%	7.04%	
Total	Count	123	31	40	2	46	168	2	412	
	% within Q31	29.85%	7.52%	9.71%	0.49%	11.17%	40.78%	0.49%	100.00%	
	% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q32a-As a prime contractor/vendor did you experience harassment on the jobsite when bidding or working on WSSC Water projects? * Business Ownership Crosstabulation	Yes	Count	1	0	0	0	0	0	0	1
		% within Q32a	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
		% within Business Ownership	0.31%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.12%
	No	Count	312	65	62	4	134	262	8	847
		% within Q32a	36.84%	7.67%	7.32%	0.47%	15.82%	30.93%	0.94%	100.00%
		% within Business Ownership	96.00%	97.01%	98.41%	100.00%	97.81%	100.00%	100.00%	97.81%
	Don't Know	Count	12	2	1	0	3	0	0	18
		% within Q32a	66.67%	11.11%	5.56%	0.00%	16.67%	0.00%	0.00%	100.00%
		% within Business Ownership	3.69%	2.99%	1.59%	0.00%	2.19%	0.00%	0.00%	2.08%
Total		Count	325	67	63	4	137	262	8	866
		% within Q32a	37.53%	7.74%	7.27%	0.46%	15.82%	30.25%	0.92%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership						Total	
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE		Don't Know
Q32bAs a prime contractor/vendor did you experience discriminatory behavior by NTTA when attempting to work or while working on a project between 2016 and 2018? * Business Ownership Crosstabulation	Yes	Count	10	1	1	0	1	1	0	14
		% within Q32b	71.43%	7.14%	7.14%	0.00%	7.14%	7.14%	0.00%	100.00%
		% within Business Ownership	3.08%	1.49%	1.59%	0.00%	0.73%	0.38%	0.00%	1.62%
	No	Count	298	64	61	4	133	261	8	829
		% within Q32b	35.95%	7.72%	7.36%	0.48%	16.04%	31.48%	0.97%	100.00%
		% within Business Ownership	91.69%	95.52%	96.83%	100.00%	97.08%	99.62%	100.00%	95.73%
	Don't Know	Count	17	2	1	0	3	0	0	23
		% within Q32b	73.91%	8.70%	4.35%	0.00%	13.04%	0.00%	0.00%	100.00%
		% within Business Ownership	5.23%	2.99%	1.59%	0.00%	2.19%	0.00%	0.00%	2.66%
Total	Count	325	67	63	4	137	262	8	866	
	% within Q32b	37.53%	7.74%	7.27%	0.46%	15.82%	30.25%	0.92%	100.00%	
	% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q32c-As a prime contractor/vendor did you experience double standards in performance when bidding or working on WSSC Water projects? * Business Ownership Crosstabulation	Yes	Count	9	1	1	0	1	0	0	12
		% within Q32c	75.00%	8.33%	8.33%	0.00%	8.33%	0.00%	0.00%	100.00%
		% within Business Ownership	2.78%	1.49%	1.59%	0.00%	0.73%	0.00%	0.00%	1.39%
	No	Count	299	64	60	4	133	262	8	830
		% within Q32c	36.02%	7.71%	7.23%	0.48%	16.02%	31.57%	0.96%	100.00%
		% within Business Ownership	92.28%	95.52%	95.24%	100.00%	97.08%	100.00%	100.00%	95.95%
	Don't Know	Count	16	2	2	0	3	0	0	23
		% within Q32c	69.57%	8.70%	8.70%	0.00%	13.04%	0.00%	0.00%	100.00%
		% within Business Ownership	4.94%	2.99%	3.17%	0.00%	2.19%	0.00%	0.00%	2.66%
Total	Count	324	67	63	4	137	262	8	865	
	% within Q32c	37.46%	7.75%	7.28%	0.46%	15.84%	30.29%	0.92%	100.00%	
	% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q32d-As a prime contractor/vendor did you experience denial of opportunity to bid when bidding or working on WSSC Water projects? * Business Ownership Crosstabulation	Yes	Count	7	1	0	0	0	2	0	10
		% within Q32d	70.00%	10.00%	0.00%	0.00%	0.00%	20.00%	0.00%	100.00%
		% within Business Ownership	2.16%	1.49%	0.00%	0.00%	0.00%	0.76%	0.00%	1.16%
	No	Count	298	64	62	4	134	260	8	830
		% within Q32d	35.90%	7.71%	7.47%	0.48%	16.14%	31.33%	0.96%	100.00%
		% within Business Ownership	91.98%	95.52%	98.41%	100.00%	97.81%	99.24%	100.00%	95.95%
	Don't Know	Count	19	2	1	0	3	0	0	25
		% within Q32d	76.00%	8.00%	4.00%	0.00%	12.00%	0.00%	0.00%	100.00%
		% within Business Ownership	5.86%	2.99%	1.59%	0.00%	2.19%	0.00%	0.00%	2.89%
Total		Count	324	67	63	4	137	262	8	865
		% within Q32d	37.46%	7.75%	7.28%	0.46%	15.84%	30.29%	0.92%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q32e-As a prime contractor/vendor did you experience unfair denial of contract award when bidding or working on WSSC Water projects? * Business Ownership Crosstabulation	Yes	Count	4	2	1	0	1	0	0	8
		% within Q32e	50.00%	25.00%	12.50%	0.00%	12.50%	0.00%	0.00%	100.00%
		% within Business Ownership	1.24%	2.99%	1.59%	0.00%	0.73%	0.00%	0.00%	0.93%
	No	Count	300	63	61	4	133	262	8	831
		% within Q32e	36.10%	7.58%	7.34%	0.48%	16.00%	31.53%	0.96%	100.00%
		% within Business Ownership	92.88%	94.03%	96.83%	100.00%	97.08%	100.00%	100.00%	96.18%
	Don't Know	Count	19	2	1	0	3	0	0	25
		% within Q32e	76.00%	8.00%	4.00%	0.00%	12.00%	0.00%	0.00%	100.00%
		% within Business Ownership	5.88%	2.99%	1.59%	0.00%	2.19%	0.00%	0.00%	2.89%
Total	Count	323	67	63	4	137	262	8	864	
	% within Q32e	37.38%	7.75%	7.29%	0.46%	15.86%	30.32%	0.93%	100.00%	
	% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q32f-As a prime contractor/vendor did you experience unfair termination when bidding or working on WSSC Water projects? * Business Ownership Crosstabulation	Yes	Count	2	1	0	0	1	1	0	5
		% within Q32f	40.00%	20.00%	0.00%	0.00%	20.00%	20.00%	0.00%	100.00%
		% within Business Ownership	0.62%	1.49%	0.00%	0.00%	0.73%	0.38%	0.00%	0.58%
	No	Count	307	64	62	4	134	261	8	840
		% within Q32f	36.55%	7.62%	7.38%	0.48%	15.95%	31.07%	0.95%	100.00%
		% within Business Ownership	94.46%	95.52%	98.41%	100.00%	97.81%	99.62%	100.00%	97.00%
	Don't Know	Count	15	2	1	0	2	0	0	20
		% within Q32f	75.00%	10.00%	5.00%	0.00%	10.00%	0.00%	0.00%	100.00%
		% within Business Ownership	4.63%	2.99%	1.59%	0.00%	1.46%	0.00%	0.00%	2.31%
Total		Count	324	67	63	4	137	262	8	865
		% within Q32f	37.46%	7.75%	7.28%	0.46%	15.84%	30.29%	0.92%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q32g-As a prime contractor/vendor did you experience unequal price quotes from suppliers when bidding or working on WSSC Water projects? * Business Ownership Crosstabulation	Yes	Count	7	1	0	0	0	1	0	9
		% within Q32g	77.78%	11.11%	0.00%	0.00%	0.00%	11.11%	0.00%	100.00%
		% within Business Ownership	2.17%	1.49%	0.00%	0.00%	0.00%	0.38%	0.00%	1.04%
	No	Count	298	64	62	4	133	260	8	829
		% within Q32g	35.95%	7.72%	7.48%	0.48%	16.04%	31.36%	0.97%	100.00%
		% within Business Ownership	92.26%	95.52%	98.41%	100.00%	97.08%	99.24%	100.00%	95.95%
	Don't Know	Count	18	2	1	0	4	1	0	26
		% within Q32g	69.23%	7.69%	3.85%	0.00%	15.38%	3.85%	0.00%	100.00%
		% within Business Ownership	5.57%	2.99%	1.59%	0.00%	2.92%	0.38%	0.00%	3.01%
Total		Count	323	67	63	4	137	262	8	864
		% within Q32g	37.38%	7.75%	7.29%	0.46%	15.86%	30.32%	0.93%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q32h-As a prime contractor/vendor did you experience other discrimination when bidding or working on WSSC Water projects? * Business Ownership Crosstabulation	Yes	Count	0	1	0	0	0	1	0	2
		% within Q32h	0.00%	50.00%	0.00%	0.00%	0.00%	50.00%	0.00%	100.00%
		% within Business Ownership	0.00%	1.54%	0.00%	0.00%	0.00%	0.39%	0.00%	0.24%
	No	Count	286	63	59	4	124	255	7	798
		% within Q32h	35.84%	7.89%	7.39%	0.50%	15.54%	31.95%	0.88%	100.00%
		% within Business Ownership	95.02%	96.92%	96.72%	100.00%	97.64%	99.61%	100.00%	97.20%
	Don't Know	Count	15	1	2	0	3	0	0	21
		% within Q32h	71.43%	4.76%	9.52%	0.00%	14.29%	0.00%	0.00%	100.00%
		% within Business Ownership	4.98%	1.54%	3.28%	0.00%	2.36%	0.00%	0.00%	2.56%
Total	Count	301	65	61	4	127	256	7	821	
	% within Q32h	36.66%	7.92%	7.43%	0.49%	15.47%	31.18%	0.85%	100.00%	
	% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q34a-As a prime contractor/vendor were you made aware of discrimination through verbal comment? * Business Ownership Crosstabulation	Yes	Count	44	7	6		10	3	0	70
		% within Q34a	62.86%	10.00%	8.57%	0.00%	14.29%	4.29%	0.00%	100.00%
		% within Business Ownership	41.51%	50.00%	37.50%	0.00%	55.56%	25.00%	0.00%	41.92%
	No	Count	62	7	10	1	8	9	0	97
		% within Q34a	63.92%	7.22%	10.31%	1.03%	8.25%	9.28%	0.00%	100.00%
		% within Business Ownership	58.49%	50.00%	62.50%	100.00%	44.44%	75.00%	0.00%	58.08%
Total		Count	106	14	16	1	18	12	0	167
		% within Q34a	63.47%	8.38%	9.58%	0.60%	10.78%	7.19%	0.00%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q34b-As a prime contractor/vendor were you made aware of discrimination through written statements/documents? * Business Ownership Crosstabulation	Yes	Count	10	2	0	1	2	4	0	19
		% within Q34b	52.63%	10.53%	0.00%	5.26%	10.53%	21.05%	0.00%	100.00%
		% within Business Ownership	9.62%	15.38%	0.00%	100.00%	11.11%	33.33%		11.59%
	No	Count	94	11	16	0	16	8	0	145
		% within Q34b	64.83%	7.59%	11.03%	0.00%	11.03%	5.52%	0.00%	100.00%
		% within Business Ownership	90.38%	84.62%	100.00%	0.00%	88.89%	66.67%		88.41%
Total		Count	104	13	16	1	18	12	0	164
		% within Q34b	63.41%	7.93%	9.76%	0.61%	10.98%	7.32%	0.00%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%		100.00%

			Business Ownership						Total	
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE		Don't Know
Q34c-As a prime contractor/vendor were you made aware of discrimination through written statements/documents? * Business Ownership Crosstabulation	Yes	Count	10	2	0	1	2	4	0	19
		% within Q34c	52.63%	10.53%	0.00%	5.26%	10.53%	21.05%	0.00%	100.00%
		% within Business Ownership	9.62%	15.38%	0.00%	100.00%	11.11%	33.33%		11.59%
	No	Count	94	11	16	0	16	8	0	145
		% within Q34c	64.83%	7.59%	11.03%	0.00%	11.03%	5.52%	0.00%	100.00%
		% within Business Ownership	90.38%	84.62%	100.00%	0.00%	88.89%	66.67%		88.41%
Total		Count	104	13	16	1	18	12	0	164
		% within Q34c	63.41%	7.93%	9.76%	0.61%	10.98%	7.32%	0.00%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%		100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q34d-As a prime contractor/vendor were you made aware of discrimination through Action Against the Company? * Business Ownership Crosstabulation	Yes	Count	17	1	0	0	1	1	0	20
		% within Q34d	85.00%	5.00%	0.00%	0.00%	5.00%	5.00%	0.00%	100.00%
		% within Business Ownership	16.35%	7.69%	0.00%	0.00%	5.56%	8.33%		12.20%
	No	Count	87	12	16	1	17	11	0	144
		% within Q34d	60.42%	8.33%	11.11%	0.69%	11.81%	7.64%	0.00%	100.00%
		% within Business Ownership	83.65%	92.31%	100.00%	100.00%	94.44%	91.67%		87.80%
Total		Count	104	13	16	1	18	12	0	164
		% within Q34d	63.41%	7.93%	9.76%	0.61%	10.98%	7.32%	0.00%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%		100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q34e-As a prime contractor/vendor are you unsure how you were made aware of discrimination? * Business Ownership Crosstabulation	Yes	Count	21	1	8	0	2	3	0	35
		% within Q34e	60.00%	2.86%	22.86%	0.00%	5.71%	8.57%	0.00%	100.00%
		% within Business Ownership	20.19%	7.69%	50.00%	0.00%	11.11%	25.00%		21.34%
	No	Count	83	12	8	1	16	9	0	129
		% within Q34e	64.34%	9.30%	6.20%	0.78%	12.40%	6.98%	0.00%	100.00%
		% within Business Ownership	79.81%	92.31%	50.00%	100.00%	88.89%	75.00%		78.66%
Total		Count	104	13	16	1	18	12	0	164
		% within Q34e	63.41%	7.93%	9.76%	0.61%	10.98%	7.32%	0.00%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%		100.00%

			Business Ownership						Total	
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE		Don't Know
Q34f-As a prime contractor/vendor did some other event make you aware of discrimination? * Business Ownership Crosstabulation	Yes	Count	28	4	4	0	4	2	0	42
		% within Q34f	66.67%	9.52%	9.52%	0.00%	9.52%	4.76%	0.00%	100.00%
		% within Business Ownership	27.18%	30.77%	25.00%	0.00%	22.22%	16.67%		25.77%
	No	Count	75	9	12	1	14	10	0	121
		% within Q34f	61.98%	7.44%	9.92%	0.83%	11.57%	8.26%	0.00%	100.00%
		% within Business Ownership	72.82%	69.23%	75.00%	100.00%	77.78%	83.33%		74.23%
Total		Count	103	13	16	1	18	12	0	163
		% within Q34f	63.19%	7.98%	9.82%	0.61%	11.04%	7.36%	0.00%	100.00%
		% within Business Ownership	100.00%	92.86%	100.00%	100.00%	100.00%	100.00%		97.60%

			Business Ownership						Total	
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE		Don't Know
Q36-Which of the following do you consider the primary reason for your company being discriminated against? * Business Ownership Crosstabulation	Owner's race or ethnicity	Count	8	1	0	0	1	1	0	11
		% within Q36	72.73%	9.09%	0.00%	0.00%	9.09%	9.09%	0.00%	100.00%
		% within Business Ownership	23.53%	25.00%	0.00%		20.00%	25.00%		15.49%
	Owner's gender	Count	0	0	1	0	1	0	0	2
		% within Q36	0.00%	0.00%	50.00%	0.00%	50.00%	0.00%	0.00%	100.00%
		% within Business Ownership	0.00%	0.00%	25.00%		20.00%	0.00%		2.82%
	Both race and gender	Count	7	0	1	0	0	1	0	9
		% within Q36	77.78%	0.00%	11.11%	0.00%	0.00%	11.11%	0.00%	100.00%
		% within Business Ownership	20.59%	0.00%	25.00%		0.00%	25.00%		12.68%
	Other reason	Count	19	3	2	0	3	2	0	29
		% within Q36	65.52%	10.34%	6.90%	0.00%	10.34%	6.90%	0.00%	100.00%
		% within Business Ownership	55.88%	75.00%	50.00%		60.00%	50.00%		40.85%
	Don't Know	Count	13	0	1	0	2	4	0	20
		% within Q36	65.00%	0.00%	5.00%	0.00%	10.00%	20.00%	0.00%	100.00%
		% within Business Ownership	38.24%	0.00%	25.00%		40.00%	100.00%		28.17%
Total		Count	34	4	4	0	5	4	0	71
		% within Q36	47.89%	5.63%	5.63%	0.00%	7.04%	5.63%	0.00%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%		100.00%	100.00%		100.00%

			Business Ownership						Total	
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE		Don't Know
Q39-Did you file a complaint? * Business Ownership Crosstabulation	Yes	Count	4	2	0	0	0	0	0	6
		% within Q39	66.67%	33.33%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
		% within Business Ownership	9.09%	50.00%	0.00%		0.00%	0.00%		9.52%
	No	Count	32	2	2	0	6	6	0	48
		% within Q39	66.67%	4.17%	4.17%	0.00%	12.50%	12.50%	0.00%	100.00%
		% within Business Ownership	72.73%	50.00%	66.67%		100.00%	100.00%		76.19%
	Don't Know	Count	8	0	1	0	0	0	0	9
		% within Q39	88.89%	0.00%	11.11%	0.00%	0.00%	0.00%	0.00%	100.00%
		% within Business Ownership	18.18%	0.00%	33.33%		0.00%	0.00%		14.29%
Total		Count	44	4	3	0	6	6	0	63
		% within Q39	69.84%	6.35%	4.76%	0.00%	9.52%	9.52%	0.00%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%		100.00%	100.00%		100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q40-In general, which of the following ranges best approximates your company's largest subcontract between January 1, 2016 and December 31, 2018? * Business Ownership Crosstabulation	None	Count	36	6	4	0	3	21	0	70
		% within Q40	51.43%	8.57%	5.71%	0.00%	4.29%	30.00%	0.00%	100.00%
		% within Business Ownership	12.63%	15.79%	6.90%	0.00%	4.41%	13.13%	0.00%	11.38%
	<\$50k	Count	51	3	1	0	10	12	0	77
		% within Q40	66.23%	3.90%	1.30%	0.00%	12.99%	15.58%	0.00%	100.00%
		% within Business Ownership	17.89%	7.89%	1.72%	0.00%	14.71%	7.50%	0.00%	12.52%
	\$50k-\$100k	Count	25	5	8	0	8	7	0	53
		% within Q40	47.17%	9.43%	15.09%	0.00%	15.09%	13.21%	0.00%	100.00%
		% within Business Ownership	8.77%	13.16%	13.79%	0.00%	11.76%	4.38%	0.00%	8.62%
	\$100k-\$200k	Count	32	2	1	0	9	3	0	47
		% within Q40	68.09%	4.26%	2.13%	0.00%	19.15%	6.38%	0.00%	100.00%
		% within Business Ownership	11.23%	5.26%	1.72%	0.00%	13.24%	1.88%	0.00%	7.64%
	\$200k-\$300k	Count	28	3	6	0	7	11	0	55
		% within Q40	50.91%	5.45%	10.91%	0.00%	12.73%	20.00%	0.00%	100.00%
		% within Business Ownership	9.82%	7.89%	10.34%	0.00%	10.29%	6.88%	0.00%	8.94%
	\$300k-\$400k	Count	13	1	5	0	7	13	1	40
		% within Q40	32.50%	2.50%	12.50%	0.00%	17.50%	32.50%	2.50%	100.00%
		% within Business Ownership	4.56%	2.63%	8.62%	0.00%	10.29%	8.13%	20.00%	6.50%

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	\$400k-\$500k	Count	14	0	4	0	3	19	0	40
		% within Q40	35.00%	0.00%	10.00%	0.00%	7.50%	47.50%	0.00%	100.00%
		% within Business Ownership	4.91%	0.00%	6.90%	0.00%	4.41%	11.88%	0.00%	6.50%
	\$500k-\$1m	Count	28	9	11	1	3	37	0	89
		% within Q40	31.46%	10.11%	12.36%	1.12%	3.37%	41.57%	0.00%	100.00%
		% within Business Ownership	9.82%	23.68%	18.97%	100.00%	4.41%	23.13%	0.00%	14.47%
	>\$1m	Count	45	6	14	0	9	27	4	105
		% within Q40	42.86%	5.71%	13.33%	0.00%	8.57%	25.71%	3.81%	100.00%
		% within Business Ownership	15.79%	15.79%	24.14%	0.00%	13.24%	16.88%	80.00%	17.07%
	Don't Know	Count	13	3	4	0	9	10	0	39
		% within Q40	33.33%	7.69%	10.26%	0.00%	23.08%	25.64%	0.00%	100.00%
		% within Business Ownership	4.56%	7.89%	6.90%	0.00%	13.24%	6.25%	0.00%	6.34%
Total	Count	285	38	58	1	68	160	5	615	
	% within Q40	46.34%	6.18%	9.43%	0.16%	11.06%	26.02%	0.81%	100.00%	
	% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	

			Business Ownership						Total	
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE		Don't Know
Q41a- In your experience, have any of the following been a barrier when attempting to do work or while working as a subcontractor with primes on projects for WSSC Water: Awareness of contracting opportunities? * Business Ownership Crosstabulation	Yes	Count	42	5	5	1	7	10	0	70
		% within Q41a	60.00%	7.14%	7.14%	1.43%	10.00%	14.29%	0.00%	100.00%
		% within Business Ownership	15.11%	13.51%	8.62%	100.00%	10.29%	6.49%	0.00%	11.65%
	No	Count	216	28	48	0	59	143	5	499
		% within Q41a	43.29%	5.61%	9.62%	0.00%	11.82%	28.66%	1.00%	100.00%
		% within Business Ownership	77.70%	75.68%	82.76%	0.00%	86.76%	92.86%	100.00%	83.03%
	Don't Know	Count	20	4	5	0	2	1	0	32
		% within Q41a	62.50%	12.50%	15.63%	0.00%	6.25%	3.13%	0.00%	100.00%
		% within Business Ownership	7.19%	10.81%	8.62%	0.00%	2.94%	0.65%	0.00%	5.32%
Total		Count	278	37	58	1	68	154	5	601
		% within Q41a	46.26%	6.16%	9.65%	0.17%	11.31%	25.62%	0.83%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership						Total	
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE		Don't Know
Q41b- In your experience, have any of the following been a barrier when attempting to do work or while working as a subcontractor with primes on projects for WSSC Water: Bond Requirements? * Business Ownership Crosstabulation	Yes	Count	52	5	10	1	4	7	0	79
		% within Q41b	65.82%	6.33%	12.66%	1.27%	5.06%	8.86%	0.00%	100.00%
		% within Business Ownership	18.44%	13.51%	17.24%	100.00%	5.88%	4.55%	0.00%	13.06%
	No	Count	212	29	44	0	62	147	5	499
		% within Q41b	42.48%	5.81%	8.82%	0.00%	12.42%	29.46%	1.00%	100.00%
		% within Business Ownership	75.18%	78.38%	75.86%	0.00%	91.18%	95.45%	100.00%	82.48%
	Don't Know	Count	18	3	4	0	2	0	0	27
		% within Q41b	66.67%	11.11%	14.81%	0.00%	7.41%	0.00%	0.00%	100.00%
		% within Business Ownership	6.38%	8.11%	6.90%	0.00%	2.94%	0.00%	0.00%	4.46%
Total		Count	282	37	58	1	68	154	5	605
		% within Q41b	46.61%	6.12%	9.59%	0.17%	11.24%	25.45%	0.83%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q41c- In your experience, have any of the following been a barrier when attempting to do work or while working as a subcontractor with primes on projects for WSSC Water: Limited time to prepare bid or quote * Business Ownership Crosstabulation	Yes	Count	29	3	5	1	2	8	1	49
		% within Q41c	59.18%	6.12%	10.20%	2.04%	4.08%	16.33%	2.04%	100.00%
		% within Business Ownership	10.32%	8.11%	8.62%	100.00%	2.94%	5.19%	20.00%	8.11%
	No	Count	227	31	48	0	64	146	4	520
		% within Q41c	43.65%	5.96%	9.23%	0.00%	12.31%	28.08%	0.77%	100.00%
		% within Business Ownership	80.78%	83.78%	82.76%	0.00%	94.12%	94.81%	80.00%	86.09%
	Don't Know	Count	25	3	5	0	2	0	0	35
		% within Q41c	71.43%	8.57%	14.29%	0.00%	5.71%	0.00%	0.00%	100.00%
		% within Business Ownership	8.90%	8.11%	8.62%	0.00%	2.94%	0.00%	0.00%	5.79%
Total		Count	281	37	58	1	68	154	5	604
		% within Q41c	46.52%	6.13%	9.60%	0.17%	11.26%	25.50%	0.83%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership						Total	
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE		Don't Know
Q41d- In your experience, have any of the following been a barrier when attempting to do work or while working as a subcontractor with primes on projects for WSSC Water: Unnecessarily restrictive contract * Business Ownership Crosstabulation	Yes	Count	36	4	4	1	7	7	1	60
		% within Q41d	60.00%	6.67%	6.67%	1.67%	11.67%	11.67%	1.67%	100.00%
		% within Business Ownership	12.81%	10.81%	6.90%	100.00%	10.29%	4.55%	20.00%	9.93%
	No	Count	223	31	49	0	58	147	4	512
		% within Q41d	43.55%	6.05%	9.57%	0.00%	11.33%	28.71%	0.78%	100.00%
		% within Business Ownership	79.36%	83.78%	84.48%	0.00%	85.29%	95.45%	80.00%	84.77%
	Don't Know	Count	22	2	5	0	3	0	0	32
		% within Q41d	68.75%	6.25%	15.63%	0.00%	9.38%	0.00%	0.00%	100.00%
		% within Business Ownership	7.83%	5.41%	8.62%	0.00%	4.41%	0.00%	0.00%	5.30%
Total		Count	281	37	58	1	68	154	5	604
		% within Q41d	46.52%	6.13%	9.60%	0.17%	11.26%	25.50%	0.83%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q41e- In your experience, have any of the following been a barrier when attempting to do work or while working as a subcontractor with primes on projects for WSSC Water: Selection process/evaluation criteria * Business Ownership Crosstabulation	Yes	Count	38	7	5	1	6	5	0	62
		% within Q41e	61.29%	11.29%	8.06%	1.61%	9.68%	8.06%	0.00%	100.00%
		% within Business Ownership	13.57%	18.92%	8.62%	100.00%	8.82%	3.25%	0.00%	10.28%
	No	Count	219	28	49	0	60	148	5	509
		% within Q41e	43.03%	5.50%	9.63%	0.00%	11.79%	29.08%	0.98%	100.00%
		% within Business Ownership	78.21%	75.68%	84.48%	0.00%	88.24%	96.10%	100.00%	84.41%
	Don't Know	Count	23	2	4	0	2	1	0	32
		% within Q41e	71.88%	6.25%	12.50%	0.00%	6.25%	3.13%	0.00%	100.00%
		% within Business Ownership	8.21%	5.41%	6.90%	0.00%	2.94%	0.65%	0.00%	5.31%
Total		Count	280	37	58	1	68	154	5	603
		% within Q41e	46.43%	6.14%	9.62%	0.17%	11.28%	25.54%	0.83%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

		Business Ownership							Total	
		African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know		
Q41f- In your experience, have any of the following been a barrier when attempting to do work or while working as a subcontractor with primes on projects for WSSC Water: Insurance requirements * Business Ownership Crosstabulation	Yes	Count	28	5	4	1	3	4	0	45
		% within Q41f	62.22%	11.11%	8.89%	2.22%	6.67%	8.89%	0.00%	100.00%
		% within Business Ownership	10.04%	13.51%	6.90%	100.00%	4.41%	2.60%	0.00%	7.48%
	No	Count	226	29	49	0	63	150	5	522
		% within Q41f	43.30%	5.56%	9.39%	0.00%	12.07%	28.74%	0.96%	100.00%
		% within Business Ownership	81.00%	78.38%	84.48%	0.00%	92.65%	97.40%	100.00%	86.71%
	Don't Know	Count	25	3	5	0	2	0	0	35
		% within Q41f	71.43%	8.57%	14.29%	0.00%	5.71%	0.00%	0.00%	100.00%
		% within Business Ownership	8.96%	8.11%	8.62%	0.00%	2.94%	0.00%	0.00%	5.81%
Total		Count	279	37	58	1	68	154	5	602
		% within Q41f	46.35%	6.15%	9.63%	0.17%	11.30%	25.58%	0.83%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership						Total	
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE		Don't Know
Q41g- In your experience, have any of the following been a barrier when attempting to do work or while working as a subcontractor with primes on projects for WSSC Water: Cost of bidding/proposing * Business Ownership Crosstabulation	Yes	Count	28	5	3	1	1	2	0	40
		% within Q41g	70.00%	12.50%	7.50%	2.50%	2.50%	5.00%	0.00%	100.00%
		% within Business Ownership	10.04%	13.51%	5.17%	100.00%	1.49%	1.30%	0.00%	6.66%
	No	Count	224	29	49	0	63	150	5	520
		% within Q41g	43.08%	5.58%	9.42%	0.00%	12.12%	28.85%	0.96%	100.00%
		% within Business Ownership	80.29%	78.38%	84.48%	0.00%	94.03%	97.40%	100.00%	86.52%
	Don't Know	Count	27	3	6	0	3	2	0	41
		% within Q41g	65.85%	7.32%	14.63%	0.00%	7.32%	4.88%	0.00%	100.00%
		% within Business Ownership	9.68%	8.11%	10.34%	0.00%	4.48%	1.30%	0.00%	6.82%
Total	Count	279	37	58	1	67	154	5	601	
	% within Q41g	46.42%	6.16%	9.65%	0.17%	11.15%	25.62%	0.83%	100.00%	
	% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	

			Business Ownership						Total	
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE		Don't Know
Q41h- In your experience, have any of the following been a barrier when attempting to do work or while working as a subcontractor with primes on projects for WSSC Water: Price of supplies/materials * Business Ownership Crosstabulation	Yes	Count	12	2	0	1	2	4	0	21
		% within Q41h	57.14%	9.52%	0.00%	4.76%	9.52%	19.05%	0.00%	100.00%
		% within Business Ownership	4.32%	5.41%	0.00%	100.00%	2.99%	2.55%	0.00%	3.50%
	No	Count	245	33	54	0	64	150	5	551
		% within Q41h	44.46%	5.99%	9.80%	0.00%	11.62%	27.22%	0.91%	100.00%
		% within Business Ownership	88.13%	89.19%	98.18%	0.00%	95.52%	95.54%	100.00%	91.83%
	Don't Know	Count	21	2	1	0	1	3	0	28
		% within Q41h	75.00%	7.14%	3.57%	0.00%	3.57%	10.71%	0.00%	100.00%
		% within Business Ownership	7.55%	5.41%	1.82%	0.00%	1.49%	1.91%	0.00%	4.67%
Total	Count	278	37	55	1	67	157	5	600	
	% within Q41h	46.33%	6.17%	9.17%	0.17%	11.17%	26.17%	0.83%	100.00%	
	% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	

		Business Ownership								Total
		African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know		
Q41i- In your experience, have any of the following been a barrier when attempting to do work or while working as a subcontractor with primes on projects for WSSC Water: Competing with large companies * Business Ownership Crosstabulation	Yes	Count	45	6	5	1	6	11	0	74
		% within Q41i	60.81%	8.11%	6.76%	1.35%	8.11%	14.86%	0.00%	100.00%
		% within Business Ownership	16.25%	16.22%	8.62%	100.00%	8.96%	7.19%	0.00%	12.37%
	No	Count	212	29	48	0	60	142	5	496
		% within Q41i	42.74%	5.85%	9.68%	0.00%	12.10%	28.63%	1.01%	100.00%
		% within Business Ownership	76.53%	78.38%	82.76%	0.00%	89.55%	92.81%	100.00%	82.94%
	Don't Know	Count	20	2	5	0	1	0	0	28
		% within Q41i	71.43%	7.14%	17.86%	0.00%	3.57%	0.00%	0.00%	100.00%
		% within Business Ownership	7.22%	5.41%	8.62%	0.00%	1.49%	0.00%	0.00%	4.68%
Total		Count	277	37	58	1	67	153	5	598
		% within Q41i	46.32%	6.19%	9.70%	0.17%	11.20%	25.59%	0.84%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership						Total	
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE		Don't Know
Q41j- In your experience, have any of the following been a barrier when attempting to do work or while working as a subcontractor with primes on projects for WSSC Water: Financing * Business Ownership Crosstabulation	Yes	Count	22	2	1	0	3	7	0	35
		% within Q41j	62.86%	5.71%	2.86%	0.00%	8.57%	20.00%	0.00%	100.00%
		% within Business Ownership	7.94%	5.41%	1.75%	0.00%	4.48%	3.17%	0.00%	5.26%
	No	Count	235	33	51	1	63	213	5	601
		% within Q41j	39.10%	5.49%	8.49%	0.17%	10.48%	35.44%	0.83%	100.00%
		% within Business Ownership	84.84%	89.19%	89.47%	100.00%	94.03%	96.38%	100.00%	90.38%
	Don't Know	Count	20	2	5	0	1	1	0	29
		% within Q41j	68.97%	6.90%	17.24%	0.00%	3.45%	3.45%	0.00%	100.00%
		% within Business Ownership	7.22%	5.41%	8.77%	0.00%	1.49%	0.45%	0.00%	4.36%
Total		Count	277	37	57	1	67	221	5	665
		% within Q41j	41.65%	5.56%	8.57%	0.15%	10.08%	33.23%	0.75%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q41k- In your experience, have any of the following been a barrier when attempting to do work or while working as a subcontractor with primes on projects for WSSC Water: Lack of experience * Business Ownership Crosstabulation	Yes	Count	54	7	9	1	3	5	0	79
		% within Q41k	68.35%	8.86%	11.39%	1.27%	3.80%	6.33%	0.00%	100.00%
		% within Business Ownership	19.22%	18.92%	15.52%	100.00%	4.48%	3.25%	0.00%	13.10%
	No	Count	207	28	45	0	62	149	5	496
		% within Q41k	41.73%	5.65%	9.07%	0.00%	12.50%	30.04%	1.01%	100.00%
		% within Business Ownership	73.67%	75.68%	77.59%	0.00%	92.54%	96.75%	100.00%	82.26%
	Don't Know	Count	20	2	4	0	2	0	0	28
		% within Q41k	71.43%	7.14%	14.29%	0.00%	7.14%	0.00%	0.00%	100.00%
		% within Business Ownership	7.12%	5.41%	6.90%	0.00%	2.99%	0.00%	0.00%	4.64%
Total		Count	281	37	58	1	67	154	5	603
		% within Q41k	46.60%	6.14%	9.62%	0.17%	11.11%	25.54%	0.83%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership						Total	
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE		Don't Know
Q41l- In your experience, have any of the following been a barrier when attempting to do work or while working as a subcontractor with primes on projects for WSSC Water: Contract too large * Business Ownership Crosstabulation	Yes	Count	33	4	3	1	0	2	0	43
		% within Q41l	76.74%	9.30%	6.98%	2.33%	0.00%	4.65%	0.00%	100.00%
		% within Business Ownership	11.87%	10.81%	5.17%	100.00%	0.00%	1.30%	0.00%	7.17%
	No	Count	226	31	49	0	66	152	5	529
		% within Q41l	42.72%	5.86%	9.26%	0.00%	12.48%	28.73%	0.95%	100.00%
		% within Business Ownership	81.29%	83.78%	84.48%	0.00%	98.51%	98.70%	100.00%	88.17%
	Don't Know	Count	19	2	6	0	1	0	0	28
		% within Q41l	67.86%	7.14%	21.43%	0.00%	3.57%	0.00%	0.00%	100.00%
		% within Business Ownership	6.83%	5.41%	10.34%	0.00%	1.49%	0.00%	0.00%	4.67%
Total		Count	278	37	58	1	67	154	5	600
		% within Q41l	46.33%	6.17%	9.67%	0.17%	11.17%	25.67%	0.83%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/ Pacific Islander	Hispanic American or Latino	Native American/ American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q41m- In your experience, have any of the following been a barrier when attempting to do work or while working as a subcontractor with primes on projects for WSSC Water: Informal network/ good 'ole boy * Business Ownership Crosstabulation	Yes	Count	46	6	5	1	3	7	0	68
		% within 41m	67.65%	8.82%	7.35%	1.47%	4.41%	10.29%	0.00%	100.00%
		% within Business Ownership	16.55%	16.22%	8.62%	100.00%	4.48%	4.55%	0.00%	11.33%
	No	Count	214	29	48	0	62	146	5	504
		% within 41m	42.46%	5.75%	9.52%	0.00%	12.30%	28.97%	0.99%	100.00%
		% within Business Ownership	76.98%	78.38%	82.76%	0.00%	92.54%	94.81%	100.00%	84.00%
	Don't Know	Count	18	2	5	0	2	1	0	28
		% within 41m	64.29%	7.14%	17.86%	0.00%	7.14%	3.57%	0.00%	100.00%
		% within Business Ownership	6.47%	5.41%	8.62%	0.00%	2.99%	0.65%	0.00%	4.67%
Total		Count	278	37	58	1	67	154	5	600
		% within 41m	46.33%	6.17%	9.67%	0.17%	11.17%	25.67%	0.83%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership						Total	
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE		Don't Know
Q41n- In your experience, have any of the following been a barrier when attempting to do work or while working as a subcontractor with primes on projects for WSSC Water: Changes to scope after beginning * Business Ownership Crosstabulation	Yes	Count	30	7	2	1	6	4	0	50
		% within Q41n	60.00%	14.00%	4.00%	2.00%	12.00%	8.00%	0.00%	100.00%
		% within Business Ownership	10.75%	18.92%	3.45%	100.00%	8.96%	2.60%	0.00%	8.32%
	No	Count	229	28	48	0	59	150	5	519
		% within Q41n	44.12%	5.39%	9.25%	0.00%	11.37%	28.90%	0.96%	100.00%
		% within Business Ownership	82.08%	75.68%	82.76%	0.00%	88.06%	97.40%	100.00%	86.36%
	Don't Know	Count	20	2	8	0	2	0	0	32
		% within Q41n	62.50%	6.25%	25.00%	0.00%	6.25%	0.00%	0.00%	100.00%
		% within Business Ownership	7.17%	5.41%	13.79%	0.00%	2.99%	0.00%	0.00%	5.32%
Total		Count	279	37	58	1	67	154	5	601
		% within Q41n	46.42%	6.16%	9.65%	0.17%	11.15%	25.62%	0.83%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q41o- In your experience, have any of the following been a barrier when attempting to do work or while working as a subcontractor with primes on projects for WSSC Water: Slow payment * Business Ownership Crosstabulation	Yes	Count	36	9	3	1	7	3	0	59
		% within Q41o	61.02%	15.25%	5.08%	1.69%	11.86%	5.08%	0.00%	100.00%
		% within Business Ownership	12.86%	24.32%	5.17%	100.00%	10.45%	1.96%	0.00%	9.82%
	No	Count	217	26	50	0	57	150	5	505
		% within Q41o	42.97%	5.15%	9.90%	0.00%	11.29%	29.70%	0.99%	100.00%
		% within Business Ownership	77.50%	70.27%	86.21%	0.00%	85.07%	98.04%	100.00%	84.03%
	Don't Know	Count	27	2	5	0	3	0	0	37
		% within Q41o	72.97%	5.41%	13.51%	0.00%	8.11%	0.00%	0.00%	100.00%
		% within Business Ownership	9.64%	5.41%	8.62%	0.00%	4.48%	0.00%	0.00%	6.16%
Total		Count	280	37	58	1	67	153	5	601
		% within Q41o	46.59%	6.16%	9.65%	0.17%	11.15%	25.46%	0.83%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q42- As a sub contractor/vendor are you required to have bonding? * Business Ownership Crosstabulation	Yes	Count	61	3	17	0	11	63	3	158
		% within Q42	38.61%	1.90%	10.76%	0.00%	6.96%	39.87%	1.90%	100.00%
		% within Business Ownership	21.63%	8.11%	29.31%	0.00%	15.49%	40.91%	60.00%	25.94%
	No	Count	172	31	30	0	46	83	2	364
		% within Q42	47.25%	8.52%	8.24%	0.00%	12.64%	22.80%	0.55%	100.00%
		% within Business Ownership	60.99%	83.78%	51.72%	0.00%	64.79%	53.90%	40.00%	59.77%
	Don't Know	Count	49	3	11	2	14	8	0	87
		% within Q42	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		% within Business Ownership	17.38%	8.11%	18.97%	100.00%	19.72%	5.19%	0.00%	14.29%
Total		Count	282	37	58	2	71	154	5	609
		% within Q42	46.31%	6.08%	9.52%	0.33%	11.66%	25.29%	0.82%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership						Total	
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE		Don't Know
Q43-Sub what is your current aggregate bonding capacity? * Business Ownership Crosstabulation	<\$100k	Count	9	0	2	0	0	2	0	13
		% within Q43	69.23%	0.00%	15.38%	0.00%	0.00%	15.38%	0.00%	100.00%
		% within Business Ownership	15.00%	0.00%	18.08%		0.00%	3.17%	0.00%	8.61%
	\$100k-\$250k	Count	5	1	0	0	0	3	0	9
		% within Q43	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		% within Business Ownership	8.33%	33.33%	0.00%		0.00%	4.76%	0.00%	5.96%
	\$250k-\$500k	Count	7	0	1	0	1	3	0	12
		% within Q43	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		% within Business Ownership	11.67%	0.00%	9.04%		9.09%	4.76%	0.00%	7.94%
	\$500k-\$1m	Count	15	0	6	0	3	29	0	47
		% within Q43	31.87%	0.00%	0.13%	0.00%	6.37%	61.62%	0.00%	100.00%
		% within Business Ownership	25.00%	0.00%	0.54%		27.27%	46.03%	0.00%	31.15%
	\$1m-\$1.5m	Count	3	0	0	0	2	9	0	14
		% within Q43	21.43%	0.00%	0.00%	0.00%	14.29%	64.29%	0.00%	100.00%
		% within Business Ownership	5.00%	0.00%	0.00%		18.18%	14.29%	0.00%	9.27%
	\$1.5m-\$3m	Count	4	0	0	0	2	3	0	9
		% within Q43	44.44%	0.00%	0.00%	0.00%	22.22%	33.33%	0.00%	100.00%
		% within Business Ownership	6.67%	0.00%	0.00%		18.18%	4.76%	0.00%	5.96%
	\$3m-\$5m	Count	2	0	1	0	0	4	0	7
		% within Q43	28.57%	0.00%	14.29%	0.00%	0.00%	57.14%	0.00%	100.00%
		% within Business Ownership	3.33%	0.00%	9.04%		0.00%	6.35%	0.00%	4.63%
	>\$5m	Count	8	2	5	0	2	7	2	26
		% within Q43	30.77%	7.69%	19.23%	0.00%	7.69%	26.92%	7.69%	100.00%
		% within Business Ownership	13.33%	66.67%	45.21%		18.18%	11.11%	66.67%	17.21%
Don't Know	Count	7	0	2	0	1	3	1	14	
	% within Q43	50.00%	0.00%	14.29%	0.00%	7.14%	21.43%	7.14%	100.00%	
	% within Business Ownership	11.67%	0.00%	18.08%		9.09%	4.76%	33.33%	9.27%	
Total	Count	60	3	11	0	11	63	3	151	
	% within Q43	39.72%	1.99%	7.32%	0.00%	7.28%	41.71%	1.99%	100.00%	
	% within Business Ownership	100.00%	100.00%	100.00%		100.00%	100.00%	100.00%	100.00%	

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q44a-As a subcontractor/vendor did you experience harassment on the jobsite when attempting to work or while working on a project for WSSC Water? * Business Ownership Crosstabulation	Yes	Count	1	1	0	0	1	2	0	5
		% within Q44a	20.00%	20.00%	0.00%	0.00%	20.00%	40.00%	0.00%	100.00%
		% within Business Ownership	0.36%	2.70%	0.00%	0.00%	1.43%	1.28%	0.00%	0.83%
	No	Count	254	35	52	1	67	153	5	567
		% within Q26	44.80%	6.17%	9.17%	0.18%	11.82%	26.98%	0.88%	100.00%
		% within Business Ownership	92.70%	94.59%	91.23%	100.00%	95.71%	98.08%	100.00%	94.50%
	Don't Know	Count	19	1	5	0	2	1	0	28
		% within Q26	67.86%	3.57%	17.86%	0.00%	7.14%	3.57%	0.00%	100.00%
		% within Business Ownership	6.93%	2.70%	8.77%	0.00%	2.86%	0.64%	0.00%	4.67%
Total		Count	274	37	57	1	70	156	5	600
		% within Q26	45.67%	6.17%	9.50%	0.17%	11.67%	26.00%	0.83%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q44b-As a subcontractor/vendor did you experience Unequal or unfair treatment when attempting to work or while working on a project for WSSC Water? * Business Ownership Crosstabulation	Yes	Count	7	2	2	0	0	2	0	13
		% within Q44b	53.85%	15.38%	15.38%	0.00%	0.00%	15.38%	0.00%	100.00%
		% within Business Ownership	2.55%	5.41%	3.51%	0.00%	0.00%	1.30%	0.00%	2.17%
	No	Count	249	34	49	1	68	151	5	557
		% within Q44b	44.70%	6.10%	8.80%	0.18%	12.21%	27.11%	0.90%	100.00%
		% within Business Ownership	90.88%	91.89%	85.96%	100.00%	97.14%	98.05%	100.00%	93.14%
	Don't Know	Count	18	1	6	0	2	1	0	28
		% within Q44b	64.29%	3.57%	21.43%	0.00%	7.14%	3.57%	0.00%	100.00%
		% within Business Ownership	6.57%	2.70%	10.53%	0.00%	2.86%	0.65%	0.00%	4.68%
Total		Count	274	37	57	1	70	154	5	598
		% within Q44b	45.82%	6.19%	9.53%	0.17%	11.71%	25.75%	0.84%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q44c-As a subcontractor/vendor did you experience double standards in performance when attempting to work or while working on a project for WSSC Water? * Business Ownership Crosstabulation	Yes	Count	7	2	1	0	0	0	0	10
		% within Q44c	70.00%	20.00%	10.00%	0.00%	0.00%	0.00%	0.00%	100.00%
		% within Business Ownership	2.55%	5.41%	1.75%	0.00%	0.00%	0.00%	0.00%	1.50%
	No	Count	248	34	50	1	68	221	5	627
		% within Q44c	39.55%	5.42%	7.97%	0.16%	10.85%	35.25%	0.80%	100.00%
		% within Business Ownership	90.51%	91.89%	87.72%	100.00%	97.14%	98.66%	100.00%	93.86%
	Don't Know	Count	19	1	6	0	2	3	0	31
		% within Q44c	61.29%	3.23%	19.35%	0.00%	6.45%	9.68%	0.00%	100.00%
		% within Business Ownership	6.93%	2.70%	10.53%	0.00%	2.86%	1.34%	0.00%	4.64%
Total	Count	274	37	57	1	70	224	5	668	
	% within Q44c	41.02%	5.54%	8.53%	0.15%	10.48%	33.53%	0.75%	100.00%	
	% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q44d-As a subcontractor/vendor did you experience denial of opportunity to bid when attempting to work or while working on a project for WSSC Water? * Business Ownership Crosstabulation	Yes	Count	4	1	0	0	0	2	0	7
		% within Q44d	57.14%	14.29%	0.00%	0.00%	0.00%	28.57%	0.00%	100.00%
		% within Business Ownership	1.46%	2.70%	0.00%	0.00%	0.00%	1.30%	0.00%	1.17%
	No	Count	248	35	52	1	68	151	5	560
		% within Q44d	44.29%	6.25%	9.29%	0.18%	12.14%	26.96%	0.89%	100.00%
		% within Business Ownership	90.51%	94.59%	91.23%	50.00%	97.14%	98.05%	100.00%	93.49%
	Don't Know	Count	22	1	5	1	2	1	0	32
		% within Q44d	68.75%	3.13%	15.63%	3.13%	6.25%	3.13%	0.00%	100.00%
		% within Business Ownership	8.03%	2.70%	8.77%	50.00%	2.86%	0.65%	0.00%	5.34%
Total	Count	274	37	57	2	70	154	5	599	
	% within Q44d	45.74%	6.18%	9.52%	0.33%	11.69%	25.71%	0.83%	100.00%	
	% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q44e-As a subcontractor/vendor did you experience unfair denial of contract award when attempting to work or while working on a project for WSSC Water? * Business Ownership Crosstabulation	Yes	Count	5	1	0	0	0	1	0	7
		% within Q44e	71.43%	14.29%	0.00%	0.00%	0.00%	14.29%	0.00%	100.00%
		% within Business Ownership	1.82%	2.70%	0.00%	0.00%	0.00%	0.45%	0.00%	1.05%
	No	Count	246	35	50	1	68	220	5	625
		% within Q44e	39.36%	5.60%	8.00%	0.16%	10.88%	35.20%	0.80%	100.00%
		% within Business Ownership	89.78%	94.59%	87.72%	100.00%	97.14%	98.21%	100.00%	93.56%
	Don't Know	Count	23	1	7	0	2	3	0	36
		% within Q44e	63.89%	2.78%	19.44%	0.00%	5.56%	8.33%	0.00%	100.00%
		% within Business Ownership	8.39%	2.70%	12.28%	0.00%	2.86%	1.34%	0.00%	5.39%
Total		Count	274	37	57	1	70	224	5	668
		% within Q44e	41.02%	5.54%	8.53%	0.15%	10.48%	33.53%	0.75%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q44f-As a subcontractor/vendor did you experience unfair termination when attempting to work or while working on a project for WSSC Water? * Business Ownership Crosstabulation	Yes	Count	4	1	0	0	0	0	0	5
		% within Q44f	80.00%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
		% within Business Ownership	1.46%	2.70%	0.00%	0.00%	0.00%	0.00%	0.00%	0.84%
	No	Count	252	35	52	1	68	153	5	566
		% within Q44f	44.52%	6.18%	9.19%	0.18%	12.01%	27.03%	0.88%	100.00%
		% within Business Ownership	91.97%	94.59%	91.23%	100.00%	97.14%	99.35%	100.00%	94.65%
	Don't Know	Count	18	1	5	0	2	1	0	27
		% within Q44f	66.67%	3.70%	18.52%	0.00%	7.41%	3.70%	0.00%	100.00%
		% within Business Ownership	6.57%	2.70%	8.77%	0.00%	2.86%	0.65%	0.00%	4.52%
Total		Count	274	37	57	1	70	154	5	598
		% within Q44f	45.82%	6.19%	9.53%	0.17%	11.71%	25.75%	0.84%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q44g-As a subcontractor/vendor did you experience unequal price quotes from suppliers or while working on a project for WSSC Water? * Business Ownership Crosstabulation	Yes	Count	7	1	0	0	0	1	0	9
		% within Q44g	77.78%	11.11%	0.00%	0.00%	0.00%	11.11%	0.00%	100.00%
		% within Business Ownership	2.56%	2.70%	0.00%	0.00%	0.00%	0.65%	0.00%	1.51%
	No	Count	241	34	49	0	68	152	5	549
		% within Q44g	43.90%	6.19%	8.93%	0.00%	12.39%	27.69%	0.91%	100.00%
		% within Business Ownership	88.28%	91.89%	85.96%	0.00%	97.14%	98.70%	100.00%	91.96%
	Don't Know	Count	25	2	8	1	2	1	0	39
		% within Q44g	64.10%	5.13%	20.51%	2.56%	5.13%	2.56%	0.00%	100.00%
		% within Business Ownership	9.16%	5.41%	14.04%	100.00%	2.86%	0.65%	0.00%	6.53%
	Total		Count	273	37	57	1	70	154	5
% within Q44g			45.73%	6.20%	9.55%	0.17%	11.73%	25.80%	0.84%	100.00%
% within Business Ownership			100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q44h-As a subcontractor/vendor did you experience other forms of discrimination while working on a project for WSSC Water? * Business Ownership Crosstabulation	Yes	Count	1	0	0	0	0	0	0	1
		% within Q44h	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
		% within Business Ownership	0.40%	0.00%	0.00%		0.00%	0.00%	0.00%	0.18%
	No	Count	229	29	46	0	63	149	5	521
		% within Q44h	43.95%	5.57%	8.83%	0.00%	12.09%	28.60%	0.96%	100.00%
		% within Business Ownership	92.71%	96.67%	92.00%		96.92%	100.00%	100.00%	95.42%
	Don't Know	Count	17	1	4	0	2	0	0	24
		% within Q44h	70.83%	4.17%	16.67%	0.00%	8.33%	0.00%	0.00%	100.00%
		% within Business Ownership	6.88%	3.33%	8.00%		3.08%	0.00%	0.00%	4.40%
Total		Count	247	30	50	0	65	149	5	546
		% within Q44h	45.24%	5.49%	9.16%	0.00%	11.90%	27.29%	0.92%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%		100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q46a-As a subcontractor/vendor were you made aware of discrimination through verbal comment? * Business Ownership Crosstabulation	Yes	Count	12	5	1	0	1	1	0	20
		% within Q46a	60.00%	25.00%	5.00%	0.00%	5.00%	5.00%	0.00%	100.00%
		% within Business Ownership	27.91%	55.56%	14.29%	0.00%	20.00%	33.33%	0.00%	29.41%
	No	Count	31	4	6	1	4	2	0	48
		% within Q46a	64.58%	8.33%	12.50%	2.08%	8.33%	4.17%	0.00%	100.00%
		% within Business Ownership	72.09%	44.44%	85.71%	100.00%	80.00%	66.67%	0.00%	70.59%
Total	Count	43	9	7	1	5	3	0	68	
	% within Q46a	63.24%	13.24%	10.29%	1.47%	7.35%	4.41%	0.00%	100.00%	
	% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	0.00%	100.00%	

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q46b-As a subcontractor/vendor were you made aware of discrimination through written statements/documents? * Business Ownership Crosstabulation	Yes	Count	1	1	0	0	0	1	0	3
		% within Q46b	33.33%	33.33%	0.00%	0.00%	0.00%	33.33%	0.00%	100.00%
		% within Business Ownership	2.33%	11.11%	0.00%	0.00%	0.00%	33.33%	0.00%	4.41%
	No	Count	42	8	7	1	5	2	0	65
		% within Q46b	64.62%	12.31%	10.77%	1.54%	7.69%	3.08%	0.00%	100.00%
		% within Business Ownership	97.67%	88.89%	100.00%	100.00%	100.00%	66.67%	0.00%	95.59%
Total	Count	43	9	7	1	5	3	0	68	
	% within Q46b	63.24%	13.24%	10.29%	1.47%	7.35%	4.41%	0.00%	100.00%	
	% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	0.00%	100.00%	

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q46c-As a sub contractor/vendor were you made aware of discrimination through action against the company? * Business Ownership Crosstabulation	Yes	Count	4	0	0	1	0	0	0	5
		% within Q46c	80.00%	0.00%	0.00%	20.00%	0.00%	0.00%	0.00%	100.00%
		% within Business Ownership	9.30%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	7.35%
	No	Count	39	9	7	0	5	3	0	63
		% within Q46c	61.90%	14.29%	11.11%	0.00%	7.94%	4.76%	0.00%	100.00%
		% within Business Ownership	90.70%	100.00%	100.00%	0.00%	100.00%	100.00%	0.00%	92.65%
Total	Count	43	9	7	1	5	3	0	68	
	% within Q46c	63.24%	13.24%	10.29%	1.47%	7.35%	4.41%	0.00%	100.00%	
	% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	0.00%	100.00%	

			Business Ownership						Total	
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE		Don't Know
Q46d-As a subcontractor/vendor are you unsure how you were made aware of discrimination? * Business Ownership Crosstabulation	Yes	Count	13	2	4	0	2	3	0	24
		% within Q46d	54.17%	8.33%	16.67%	0.00%	8.33%	12.50%	0.00%	100.00%
		% within Business Ownership	30.23%	22.22%	57.14%	0.00%	40.00%	100.00%	0.00%	35.29%
	No	Count	30	7	3	1	3	0	0	44
		% within Q46d	68.18%	15.91%	6.82%	2.27%	6.82%	0.00%	0.00%	100.00%
		% within Business Ownership	69.77%	77.78%	42.86%	100.00%	60.00%	0.00%	0.00%	64.71%
Total		Count	43	9	7	1	5	3	0	68
		% within Q46d	63.24%	13.24%	10.29%	1.47%	7.35%	4.41%	0.00%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	0.00%	100.00%

			Business Ownership						Total	
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE		Don't Know
Q46e-As a subcontractor/vendor is there another way you were made aware of discrimination? * Business Ownership Crosstabulation	Yes	Count	15	1	2	0	2	2	0	22
		% within Q46e	68.18%	4.55%	9.09%	0.00%	9.09%	9.09%	0.00%	100.00%
		% within Business Ownership	34.88%	11.11%	28.57%	0.00%	40.00%	25.00%	0.00%	30.14%
	No	Count	28	8	5	1	3	6	0	51
		% within Q46e	54.90%	15.69%	9.80%	1.96%	5.88%	11.76%	0.00%	100.00%
		% within Business Ownership	65.12%	88.89%	71.43%	100.00%	60.00%	75.00%	0.00%	69.86%
Total		Count	43	9	7	1	5	8	0	73
		% within Q46e	58.90%	12.33%	9.59%	1.37%	6.85%	10.96%	0.00%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	0.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q48-Which of the following do you consider the primary reason for your company being discriminated against? * Business Ownership Crosstabulation	Owner's race or ethnicity	Count	12	2	0	0	0	1	0	15
		% within Q48	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		% within Business Ownership	27.27%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	21.74%
	Owner's gender	Count	0	0	1	0	1	0	0	2
		% within Q48	0.00%	0.00%	50.00%	0.00%	50.00%	0.00%	0.00%	100.00%
		% within Business Ownership	0.00%	0.00%	0.00%	0.00%	20.00%	0.00%	0.00%	2.90%
	Both race and gender	Count	9	0	0	0	1	0	0	10
		% within Q48	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		% within Business Ownership	20.45%	0.00%	0.00%	0.00%	20.00%	0.00%	0.00%	14.49%
	Other reason	Count	8	2	2	1	1	1	0	15
		% within Q48	53.33%	13.33%	13.33%	6.67%	6.67%	6.67%	0.00%	100.00%
		% within Business Ownership	18.18%	0.00%	0.00%	0.00%	20.00%	0.00%	0.00%	21.74%
	Don't Know	Count	15	4	5	0	2	1	0	27
		% within Q48	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		% within Business Ownership	34.09%	0.00%	0.00%	0.00%	40.00%	0.00%	0.00%	39.13%
Total		Count	44	8	8	1	5	3	0	69
		% within Q48	63.77%	11.59%	11.59%	1.45%	7.25%	4.35%	0.00%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	0.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q51-Sub Did you file a complaint? * Business Ownership Crosstabulation	Yes	Count	5	0	0	1	0	0	0	6
		% within Q51	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		% within Business Ownership	12.82%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	9.23%
	No	Count	31	9	6	1	4	3	0	54
		% within Q51	57.41%	16.67%	11.11%	1.85%	7.41%	5.56%	0.00%	100.00%
		% within Business Ownership	79.49%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	83.08%
	Don't Know	Count	3	0	2	0	0	0	0	5
		% within Q51	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		% within Business Ownership	7.69%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.69%
Total		Count	39	9	8	2	4	3	0	65
		% within Q51	60.00%	13.85%	12.31%	3.08%	6.15%	4.62%	0.00%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	0.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q52- How often do prime contractors/vendors who use your firm as a subcontractor on public-sector projects with MWDBE goals solicit your firm on projects (private or public) without MWDBE goals? * Business Ownership Crosstabulation	Very Often	Count	23	5	4	0	12	9	1	54
		% within Q52	42.59%	9.26%	7.41%	0.00%	22.22%	16.67%	1.85%	100.00%
		% within Business Ownership	8.24%	13.16%	7.14%	0.00%	16.00%	5.84%	20.00%	8.88%
	Sometimes	Count	33	9	5	1	10	6	3	67
		% within Q52	49.25%	13.43%	7.46%	1.49%	14.93%	8.96%	4.48%	100.00%
		% within Business Ownership	11.83%	23.68%	8.93%	100.00%	13.33%	3.90%	60.00%	11.02%
	Seldom	Count	57	6	6	0	16	16	0	101
		% within Q52	56.44%	5.94%	5.94%	0.00%	15.84%	15.84%	0.00%	100.00%
		% within Business Ownership	20.43%	15.79%	10.71%	0.00%	21.33%	10.39%	0.00%	16.61%
	Never	Count	91	7	14	0	17	19	0	148
		% within Q52	61.49%	4.73%	9.46%	0.00%	11.49%	12.84%	0.00%	100.00%
		% within Business Ownership	32.62%	18.42%	25.00%	0.00%	22.67%	12.34%	0.00%	24.34%
	Not Applicable	Count	28	5	7	0	7	29	1	77
		% within Q52	36.36%	6.49%	9.09%	0.00%	9.09%	37.66%	1.30%	100.00%
		% within Business Ownership	10.04%	13.16%	12.50%	0.00%	9.33%	18.83%	20.00%	12.66%
Don't Know	Count	47	6	20	0	13	75	0	161	
	% within Q52	29.19%	3.73%	12.42%	0.00%	8.07%	46.58%	0.00%	100.00%	
	% within Business Ownership	16.85%	15.79%	35.71%	0.00%	17.33%	48.70%	0.00%	26.48%	
Total		Count	279	38	56	1	75	154	5	608
		% within Q52	45.89%	6.25%	9.21%	0.16%	12.34%	25.33%	0.82%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

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			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q53a Telephone - How Often have you experienced discriminatory behavior when attempting to do work or working in the private sector between 2016 and 2018? * Business Ownership Crosstabulation	Very Often	Count	28	2	2	0	4	4	0	36
		% within Q53a Tele	77.78%	5.56%	5.56%	0.00%	11.11%	11.11%	0.00%	100.00%
		% within Business Ownership	8.14%	2.74%	2.47%	0.00%	2.90%	1.12%	0.00%	3.60%
	Sometimes	Count	279	58	65	2	114	324	9	851
		% within Q53a Tele	32.78%	6.82%	7.64%	0.24%	13.40%	38.07%	1.06%	100.00%
		% within Business Ownership	81.10%	79.45%	80.25%	66.67%	82.61%	91.01%	100.00%	85.10%
	Seldom	Count	36	13	14	1	19	27	0	110
		% within Q53a Tele	32.73%	11.82%	12.73%	0.91%	17.27%	24.55%	0.00%	100.00%
		% within Business Ownership	10.47%	17.81%	17.28%	33.33%	13.77%	7.58%	0.00%	11.00%
	Never	Count	1	0	0	0	1	1	0	3
		% within Q53a Tele	33.33%	0.00%	0.00%	0.00%	33.33%	33.33%	0.00%	100.00%
		% within Business Ownership	0.29%	0.00%	0.00%	0.00%	0.72%	0.28%	0.00%	0.30%
Total		Count	344	73	81	3	138	356	9	1000
		% within Q53a Tele	34.40%	7.30%	8.10%	0.30%	13.80%	35.60%	0.90%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Washington Suburban Sanitary Commission
2022 Disparity Study

			Business Ownership						Total	
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE		Don't Know
Q53bOnline - Have you experienced discriminatory behavior when attempting to do work or working in the private sector between 2016 and 2018? * Business Ownership Crosstabulation	Yes	Count	15	4	2	0	3	1	0	25
		% within Q53b Online	60.00%	16.00%	8.00%	0.00%	12.00%	4.00%	0.00%	100.00%
		% within Business Ownership	12.20%	26.67%	10.00%	0.00%	8.57%	5.26%	0.00%	11.68%
	No	Count	103	10	15	0	31	17	1	177
		% within Q53b Online	58.19%	5.65%	8.47%	0.00%	17.51%	9.60%	0.56%	100.00%
		% within Business Ownership	83.74%	66.67%	75.00%	0.00%	88.57%	89.47%	100.00%	82.71%
	Don't Know	Count	5	1	3	1	1	1	0	12
		% within Q53b Online	41.67%	8.33%	25.00%	8.33%	8.33%	8.33%	0.00%	100.00%
		% within Business Ownership	4.07%	6.67%	15.00%	100.00%	2.86%	5.26%	0.00%	5.61%
Total		Count	123	15	20	1	35	19	1	214
		% within Q53b Online	57.48%	7.01%	9.35%	0.47%	16.36%	8.88%	0.47%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	Total
Q54a-As a subcontractor/vendor did you experience harassment on the jobsite when attempting to work or while working on a project for WSSC Water? * Business Ownership Crosstabulation	Yes	Count	50	4	4	1	7	3	0	69
		% within Q54a	72.46%	5.80%	5.80%	1.45%	10.14%	4.35%	0.00%	100.00%
		% within Business Ownership	32.89%	25.00%	18.18%	100.00%	17.95%	13.04%	0.00%	27.17%
	No	Count	92	12	13	0	29	20	1	167
		% within Q54a	55.09%	7.19%	7.78%	0.00%	17.37%	11.98%	0.60%	100.00%
		% within Business Ownership	60.53%	75.00%	59.09%	0.00%	74.36%	86.96%	100.00%	65.75%
	Don't Know	Count	10	0	5	0	3	0	0	18
		% within Q54a	55.56%	0.00%	27.78%	0.00%	16.67%	0.00%	0.00%	100.00%
		% within Business Ownership	6.58%	0.00%	22.73%	0.00%	7.69%	0.00%	0.00%	7.09%
Total		Count	152	16	22	1	39	23	1	254
		% within Q54a	59.84%	6.30%	8.66%	0.39%	15.35%	9.06%	0.39%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q54b-As a subcontractor/vendor did you experience Unequal or unfair treatment when attempting to work or while working on a project for WSSC Water? * Business Ownership Crosstabulation	Yes	Count	62	5	4	0	7	3	0	81
		% within Q54b	76.54%	6.17%	4.94%	0.00%	8.64%	3.70%	0.00%	100.00%
		% within Business Ownership	40.79%	31.25%	18.18%	0.00%	17.95%	13.04%	0.00%	31.89%
	No	Count	78	10	13	1	30	20	1	153
		% within Q54b	50.98%	6.54%	8.50%	0.65%	19.61%	13.07%	0.65%	100.00%
		% within Business Ownership	51.32%	62.50%	59.09%	100.00%	76.92%	86.96%	100.00%	60.24%
	Don't Know	Count	12	1	5	0	2	0	0	20
		% within Q54b	60.00%	5.00%	25.00%	0.00%	10.00%	0.00%	0.00%	100.00%
		% within Business Ownership	7.89%	6.25%	22.73%	0.00%	5.13%	0.00%	0.00%	7.87%
Total		Count	152	16	22	1	39	23	1	254
		% within Q54b	59.84%	6.30%	8.66%	0.39%	15.35%	9.06%	0.39%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q54c-As a subcontractor/vendor did you experience double standards in performance when attempting to work or while working on a project for WSSC Water? * Business Ownership Crosstabulation	Yes	Count	30	5	4	1	3	3	0	46
		% within Q54c	65.22%	10.87%	8.70%	2.17%	6.52%	6.52%	0.00%	100.00%
		% within Business Ownership	20.00%	31.25%	18.18%	100.00%	7.69%	13.04%	0.00%	18.25%
	No	Count	102	9	14	0	33	19	1	178
		% within Q54c	57.30%	5.06%	7.87%	0.00%	18.54%	10.67%	0.56%	100.00%
		% within Business Ownership	68.00%	56.25%	63.64%	0.00%	84.62%	82.61%	100.00%	70.63%
	Don't Know	Count	18	2	4	0	3	1	0	28
		% within Q54c	64.29%	7.14%	14.29%	0.00%	10.71%	3.57%	0.00%	100.00%
		% within Business Ownership	12.00%	12.50%	18.18%	0.00%	7.69%	4.35%	0.00%	11.11%
Total		Count	150	16	22	1	39	23	1	252
		% within Q54c	59.52%	6.35%	8.73%	0.40%	15.48%	9.13%	0.40%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	Total
Q54d-As a subcontractor/vendor did you experience denial of opportunity to bid when attempting to work or while working on a project for WSSC Water? * Business Ownership Crosstabulation	Yes	Count	42	4	5	1	6	2	0	60
		% within Q54d	70.00%	6.67%	8.33%	1.67%	10.00%	3.33%	0.00%	100.00%
		% within Business Ownership	28.00%	25.00%	22.73%	100.00%	15.38%	8.70%	0.00%	23.81%
	No	Count	82	10	11	0	29	21	1	154
		% within Q54d	53.25%	6.49%	7.14%	0.00%	18.83%	13.64%	0.65%	100.00%
		% within Business Ownership	54.67%	62.50%	50.00%	0.00%	74.36%	91.30%	100.00%	61.11%
	Don't Know	Count	26	2	6	0	4	0	0	38
		% within Q54d	68.42%	5.26%	15.79%	0.00%	10.53%	0.00%	0.00%	100.00%
		% within Business Ownership	17.33%	12.50%	27.27%	0.00%	10.26%	0.00%	0.00%	15.08%
Total		Count	150	16	22	1	39	23	1	252
		% within Q54d	59.52%	6.35%	8.73%	0.40%	15.48%	9.13%	0.40%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q54e-As a subcontractor/vendor did you experience unfair denial of contract award when attempting to work or while working on a project for WSSC Water? * Business Ownership Crosstabulation	Yes	Count	27	2	1	0	1	1	0	32
		% within Q54e	84.38%	6.25%	3.13%	0.00%	3.13%	3.13%	0.00%	100.00%
		% within Business Ownership	17.88%	13.33%	4.55%	0.00%	2.63%	4.55%	0.00%	12.80%
	No	Count	118	13	17	1	36	21	1	207
		% within Q54e	57.00%	6.28%	8.21%	0.48%	17.39%	10.14%	0.48%	100.00%
		% within Business Ownership	78.15%	86.67%	77.27%	100.00%	94.74%	95.45%	100.00%	82.80%
	Don't Know	Count	6	0	4	0	1	0	0	11
		% within Q54e	54.55%	0.00%	36.36%	0.00%	9.09%	0.00%	0.00%	100.00%
		% within Business Ownership	3.97%	0.00%	18.18%	0.00%	2.63%	0.00%	0.00%	4.40%
Total	Count	151	15	22	1	38	22	1	250	
	% within Q54e	60.40%	6.00%	8.80%	0.40%	15.20%	8.80%	0.40%	100.00%	
	% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q54f-As a subcontractor/vendor did you experience unfair termination when attempting to work or while working on a project for WSSC Water? * Business Ownership Crosstabulation	Yes	Count	35	6	0	1	4	4	0	50
		% within Q54f	70.00%	12.00%	0.00%	2.00%	8.00%	8.00%	0.00%	100.00%
		% within Business Ownership	23.03%	37.50%	0.00%	100.00%	10.26%	18.18%	0.00%	19.69%
	No	Count	95	9	16	0	27	17	1	165
		% within Q54f	57.58%	5.45%	9.70%	0.00%	16.36%	10.30%	0.61%	100.00%
		% within Business Ownership	62.50%	56.25%	72.73%	0.00%	69.23%	77.27%	50.00%	64.96%
	Don't Know	Count	22	1	6	0	8	1	1	39
		% within Q54f	56.41%	2.56%	15.38%	0.00%	20.51%	2.56%	2.56%	100.00%
		% within Business Ownership	14.47%	6.25%	27.27%	0.00%	20.51%	4.55%	50.00%	15.35%
Total	Count	152	16	22	1	39	22	2	254	
	% within Q54f	59.84%	6.30%	8.66%	0.39%	15.35%	8.66%	0.79%	100.00%	
	% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q54g-As a subcontractor/vendor did you experience unequal price quotes from suppliers or while working on a project for WSSC Water? * Business Ownership Crosstabulation	Yes	Count	12	0	0	0	0	0	0	12
		% within Q54g	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
		% within Business Ownership	42.86%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	30.00%
	No	Count	16	2	2	0	4	4	0	28
		% within Q54g	57.14%	7.14%	7.14%	0.00%	14.29%	14.29%	0.00%	100.00%
		% within Business Ownership	57.14%	100.00%	100.00%	0.00%	100.00%	100.00%	0.00%	70.00%
	Don't Know	Count	0	0	0	0	0	0	0	0
		% within Q54g	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		% within Business Ownership	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total		Count	28	2	2	0	4	4	0	40
		% within Q54g	70.00%	5.00%	5.00%	0.00%	10.00%	10.00%	0.00%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	0.00%	100.00%	100.00%	0.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q54h-As a subcontractor/vendor did you experience other form of discrimination while working on a project for WSSC Water? * Business Ownership Crosstabulation	Yes	Count	9	1	2	0	2	0	0	14
		% within Q54h	64.29%	7.14%	14.29%	0.00%	14.29%	0.00%	0.00%	100.00%
		% within Business Ownership	10.84%	14.29%	16.67%	0.00%	11.76%	0.00%	0.00%	10.61%
	No	Count	64	4	10	0	13	12	0	103
		% within Q54h	62.14%	3.88%	9.71%	0.00%	12.62%	11.65%	0.00%	100.00%
		% within Business Ownership	77.11%	57.14%	83.33%	0.00%	76.47%	92.31%	0.00%	78.03%
	Don't Know	Count	10	2	0	0	2	1	0	15
		% within Q54h	66.67%	13.33%	0.00%	0.00%	13.33%	6.67%	0.00%	100.00%
		% within Business Ownership	12.05%	28.57%	0.00%	0.00%	11.76%	7.69%	0.00%	11.36%
Total	Count	83	7	12	0	17	13	0	132	
	% within Q54h	62.88%	5.30%	9.09%	0.00%	12.88%	9.85%	0.00%	100.00%	
	% within Business Ownership	100.00%	100.00%	100.00%	0.00%	100.00%	100.00%	0.00%	100.00%	

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q56a-In the private sector were you made aware of discrimination through verbal comment? * Business Ownership Crosstabulation	Yes	Count	56	8	4	0	12	1	0	81
		% within Q56a	69.14%	9.88%	4.94%	0.00%	14.81%	1.23%	0.00%	100.00%
		% within Business Ownership	47.86%	53.33%	23.53%	0.00%	60.00%	12.50%	0.00%	45.76%
	No	Count	61	7	13	0	8	7	0	96
		% within Q56a	63.54%	7.29%	13.54%	0.00%	8.33%	7.29%	0.00%	100.00%
		% within Business Ownership	52.14%	46.67%	76.47%	0.00%	40.00%	87.50%	0.00%	54.24%
Total		Count	117	15	17	0	20	8	0	177
		% within Q56a	66.10%	8.47%	9.60%	0.00%	11.30%	4.52%	0.00%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	0.00%	100.00%	100.00%	0.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q56b-In the private sector were you made aware of discrimination through written statements/documents? * Business Ownership Crosstabulation	Yes	Count	15	2	0	0	2	2	0	21
		% within Q56b	71.43%	9.52%	0.00%	0.00%	9.52%	9.52%	0.00%	100.00%
		% within Business Ownership	12.82%	13.33%	0.00%	0.00%	10.00%	25.00%	0.00%	11.80%
	No	Count	102	13	17	1	18	6	0	157
		% within Q56b	64.97%	8.28%	10.83%	0.64%	11.46%	3.82%	0.00%	100.00%
		% within Business Ownership	87.18%	86.67%	100.00%	100.00%	90.00%	75.00%	0.00%	88.20%
Total		Count	117	15	17	1	20	8	0	178
		% within Q56b	65.73%	8.43%	9.55%	0.56%	11.24%	4.49%	0.00%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	0.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q56c-In the private sector were you made aware of discrimination through action against the company? * Business Ownership Crosstabulation	Yes	Count	23	1	1	1	2	1	0	29
		% within Q56c	79.31%	3.45%	3.45%	3.45%	6.90%	3.45%	0.00%	100.00%
		% within Business Ownership	19.66%	6.67%	5.88%	100.00%	10.00%	12.50%	0.00%	16.29%
	No	Count	94	14	16	0	18	7	0	149
		% within Q56c	63.09%	9.40%	10.74%	0.00%	12.08%	4.70%	0.00%	100.00%
		% within Business Ownership	80.34%	93.33%	94.12%	0.00%	90.00%	87.50%	0.00%	83.71%
Total	Count	117	15	17	1	20	8	0	178	
	% within Q56c	65.73%	8.43%	9.55%	0.56%	11.24%	4.49%	0.00%	100.00%	
	% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	0.00%	100.00%	

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q56d-In the private sector are you unsure how you were made aware of discrimination? * Business Ownership Crosstabulation	Yes	Count	23	1	9	0	2	3	0	38
		% within Q56d	60.53%	2.63%	23.68%	0.00%	5.26%	7.89%	0.00%	100.00%
		% within Business Ownership	19.66%	6.67%	52.94%	0.00%	10.00%	37.50%	0.00%	21.35%
	No	Count	94	14	8	1	18	5	0	140
		% within Q56d	67.14%	10.00%	5.71%	0.71%	12.86%	3.57%	0.00%	100.00%
		% within Business Ownership	80.34%	93.33%	47.06%	100.00%	90.00%	62.50%	0.00%	78.65%
Total	Count	117	15	17	1	20	8	0	178	
	% within Q56d	65.73%	8.43%	9.55%	0.56%	11.24%	4.49%	0.00%	100.00%	
	% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	0.00%	100.00%	

			Business Ownership							Total
			African American	Asian American/ Pacific Islander	Hispanic American or Latino	Native American/ American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q56e-In the private sector is there another way you were made aware of discrimination? * Business Ownership Crosstabulation	Yes	Count	28	5	4	0	4	2	0	43
		% within Q56e	65.12%	11.63%	9.30%	0.00%	9.30%	4.65%	0.00%	100.00%
		% within Business Ownership	23.93%	33.33%	25.00%	0.00%	20.00%	25.00%	0.00%	24.29%
	No	Count	89	10	12	1	16	6	0	134
		% within Q56e	66.42%	7.46%	8.96%	0.75%	11.94%	4.48%	0.00%	100.00%
		% within Business Ownership	76.07%	66.67%	75.00%	100.00%	80.00%	75.00%	0.00%	75.71%
Total	Count	117	15	16	1	20	8	0	177	
	% within Q56e	66.10%	8.47%	9.04%	0.56%	11.30%	4.52%	0.00%	100.00%	
	% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	0.00%	100.00%	

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q58-Which of the following do you consider the primary reason for your company being discriminated against? * Business Ownership Crosstabulation	Owner's race or ethnicity	Count	35	3	5	0	0	0	0	43
		% within Q58	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		% within Business Ownership	29.91%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	24.16%
	Owner's gender	Count	2	1	0	0	11	0	0	14
		% within Q58	14.29%	7.14%	0.00%	0.00%	78.57%	0.00%	0.00%	100.00%
		% within Business Ownership	1.71%	0.00%	0.00%	0.00%	55.00%	0.00%	0.00%	7.87%
	Both race and gender	Count	24	1	1	0	0	1	1	28
		% within Q58	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		% within Business Ownership	20.51%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	15.73%
	Other reason	Count	27	5	3	1	4	4	0	44
		% within Q58	61.36%	11.36%	6.82%	2.27%	9.09%	9.09%	0.00%	100.00%
		% within Business Ownership	23.08%	0.00%	0.00%	0.00%	20.00%	0.00%	0.00%	24.72%
	Don't Know	Count	29	5	8	0	5	2	0	49
		% within Q58	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		% within Business Ownership	24.79%	0.00%	0.00%	0.00%	25.00%	0.00%	0.00%	27.53%
Total		Count	117	15	17	1	20	7	1	178
		% within Q58	65.73%	8.43%	9.55%	0.56%	11.24%	3.93%	0.56%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q61-Financial Difficulties * Business Ownership Crosstabulation	Yes	Count	85	11	9	1	8	7	0	121
		% within Q61	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		% within Business Ownership	18.09%	0.00%	0.00%	0.00%	4.62%	0.00%	0.00%	9.89%
	No	Count	375	76	87	4	163	363	11	1079
		% within Q61	34.75%	7.04%	8.06%	0.37%	15.11%	33.64%	1.02%	100.00%
		% within Business Ownership	79.79%	0.00%	0.00%	0.00%	94.22%	0.00%	0.00%	88.15%
	Don't Know	Count	10	2	5	0	2	5	0	24
		% within Q61	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		% within Business Ownership	2.13%	0.00%	0.00%	0.00%	1.16%	0.00%	0.00%	1.96%
Total		Count	470	89	101	5	173	375	11	1224
		% within Q61	38.40%	7.27%	8.25%	0.41%	14.13%	30.64%	0.90%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership						Total	
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE		Don't Know
Q62- Has your company applied for a commercial (business) bank loan or line of credit between January 1, 2016 and December 31, 2018? * Business Ownership Crosstabulation	Yes	Count	120	13	17	1	28	31	1	211
		% within Q62	56.87%	6.16%	8.06%	0.47%	13.27%	14.69%	0.47%	100.00%
		% within Business Ownership	25.48%	14.61%	16.83%	20.00%	16.18%	8.27%	9.09%	17.22%
	No	Count	341	75	77	4	144	327	6	974
		% within Q62	35.01%	7.70%	7.91%	0.41%	14.78%	33.57%	0.62%	100.00%
		% within Business Ownership	72.40%	84.27%	76.24%	80.00%	83.24%	87.20%	54.55%	79.51%
	Don't Know	Count	10	1	7	0	1	17	4	40
		% within Q62	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		% within Business Ownership	2.12%	1.12%	6.93%	0.00%	0.58%	4.53%	36.36%	3.27%
Total		Count	471	89	101	5	173	375	11	1225
		% within Q62	38.45%	7.27%	8.24%	0.41%	14.12%	30.61%	0.90%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q63- Why didn't you apply for credit? * Business Ownership Crosstabulation	Credit cost too high	Count	23	7	7	2	6	17	1	63
		% within Q63	36.51%	11.11%	11.11%	3.17%	9.52%	26.98%	1.59%	100.00%
		% within Business Ownership	0.00%	0.00%	0.00%	0.00%	4.26%	5.20%	0.00%	6.51%
	Debt Averse	Count	30	7	9	0	13	21	0	80
		% within Q63	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		% within Business Ownership	0.00%	0.00%	0.00%	0.00%	9.22%	6.42%	0.00%	8.26%
	Discouraged from applying	Count	20	1	4	0	2	0	0	27
		% within Q63	74.07%	3.70%	14.81%	0.00%	7.41%	0.00%	0.00%	100.00%
		% within Business Ownership	0.00%	0.00%	0.00%	0.00%	1.42%	0.00%	0.00%	2.79%
	Have sufficient Financing	Count	255	59	56	2	115	283	5	775
		% within Q63	32.90%	7.61%	7.23%	0.26%	14.84%	36.52%	0.65%	100.00%
		% within Business Ownership	0.00%	0.00%	0.00%	0.00%	81.56%	86.54%	0.00%	80.06%
	Other	Count	3	0	0	0	0	1	0	4
		% within Q63	75.00%	0.00%	0.00%	0.00%	0.00%	25.00%	0.00%	100.00%
		% within Business Ownership	0.00%	0.00%	0.00%	0.00%	0.00%	0.31%	0.00%	0.41%
Don't know/refused	Count	7	1	1	0	5	5	0	19	
	% within Q63	36.84%	5.26%	5.26%	0.00%	26.32%	26.32%	0.00%	100.00%	
	% within Business Ownership	0.00%	0.00%	0.00%	0.00%	3.55%	1.53%	0.00%	1.96%	
Total		Count	338	75	77	4	141	327	6	968
		% within Q63	34.92%	7.75%	7.95%	0.41%	14.57%	33.78%	0.62%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q70- Amount of Credit Requested * Business Ownership Crosstabulation	<\$25k	Count	24	1	4	0	2	6	0	37
		% within Q70	64.86%	2.70%	10.81%	0.00%	5.41%	16.22%	0.00%	100.00%
		% within Business Ownership	31.17%	10.00%	26.67%	0.00%	7.69%	20.69%	0.00%	23.42%
	\$25k-\$100k	Count	21	4	2	0	8	3	0	38
		% within Q70	55.26%	10.53%	5.26%	0.00%	21.05%	7.89%	0.00%	100.00%
		% within Business Ownership	27.27%	40.00%	13.33%	0.00%	30.77%	10.34%	0.00%	24.05%
	\$100k-\$250k	Count	19	1	7	0	6	8	0	41
		% within Q70	46.34%	2.44%	17.07%	0.00%	14.63%	19.51%	0.00%	100.00%
		% within Business Ownership	24.68%	10.00%	46.67%	0.00%	23.08%	27.59%	0.00%	25.95%
	\$250k-\$1m	Count	8	1	2	0	8	7	1	27
		% within Q70	29.63%	3.70%	7.41%	0.00%	29.63%	25.93%	3.70%	100.00%
		% within Business Ownership	10.39%	10.00%	13.33%	0.00%	30.77%	24.14%	0.00%	17.09%
	>\$1m	Count	3	2	0	0	1	5	0	11
		% within Q70	27.27%	18.18%	0.00%	0.00%	9.09%	45.45%	0.00%	100.00%
		% within Business Ownership	10.39%	10.00%	13.33%		30.77%	24.14%	100.00%	17.09%
	Don't Know	Count	2	1	0	0	1	0	0.00%	4
		% within Q70	50.00%	25.00%	0.00%	0.00%	25.00%	0.00%	0.00%	100.00%
		% within Business Ownership	2.60%	10.00%	0.00%	0.00%	3.85%	0.00%	0.00%	2.53%

Total	Count	77	10	15	0	26	29	1	158
	% within Q70	48.73%	6.33%	9.49%	0.00%	16.46%	18.35%	0.63%	100.00%
	% within Business Ownership	100.00%	100.00%	100.00%		100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q71-Received Full Amount? * Business Ownership Crosstabulation	Yes	Count	62	10	13	0	26	27	1	139
		% within Q71	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		% within Business Ownership	81.58%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	88.54%
	No	Count	13	0	2	0	0	1	0	16
		% within Q71	81.25%	0.00%	12.50%	0.00%	0.00%	6.25%	0.00%	100.00%
		% within Business Ownership	17.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.19%
	Don't Know	Count	1	0	0	0	0	1	0	2
		% within Q71	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		% within Business Ownership	1.32%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.27%
Total		Count	76	10	15	0	26	29	1	157
		% within Q71	48.41%	6.37%	9.55%	0.00%	16.56%	18.47%	0.64%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	0.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q72-Percentage Received * Business Ownership Crosstabulation	<25%	Count	4	0	0	0	0	0	0	4
		% within Q72	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		% within Business Ownership	30.77%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	23.53%
	25%-50%	Count	5	0	1	0	0	0	0	6
		% within Q72	83.33%	0.00%	16.67%	0.00%	0.00%	0.00%	0.00%	100.00%
		% within Business Ownership	38.46%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	35.29%
	50%-75%	Count	2	0	1	0	0	1	0.00%	4
		% within Q72	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		% within Business Ownership	15.38%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	23.53%
	75%-100%	Count	2	0	0	0	0	0	0	2
		% within Q72	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
		% within Business Ownership	15.38%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	11.76%
	Don't Know	Count	0	0	0	0	0	1	0	1
		% within Q72	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		% within Business Ownership	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.88%
Total	Count	13	0	2	0	0	2	0	17	
	% within Q72	76.47%	0.00%	11.76%	0.00%	0.00%	11.76%	0.00%	100.00%	
	% within Business Ownership	100.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	100.00%	

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q73-Prime Dropped MBE? * Business Ownership Crosstabulation	Yes	Count	12	0	2	0	2	2	0	18
		% within Q73	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		% within Business Ownership	2.73%	0.00%	0.00%	0.00%	1.23%	0.00%	0.00%	1.55%
	No	Count	402	82	87	4	153	361	9	1098
		% within Q73	36.61%	7.47%	7.92%	0.36%	13.93%	32.88%	0.82%	100.00%
		% within Business Ownership	91.36%	0.00%	0.00%	0.00%	94.44%	0.00%	0.00%	94.41%
	Don't Know	Count	26	4	6	0	7	4	0.00%	47
		% within Q73	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		% within Business Ownership	5.91%	0.00%	0.00%	0.00%	4.32%	0.00%	0.00%	4.04%
Total		Count	440	86	95	4	162	367	9	1163
		% within Q73	37.83%	7.39%	8.17%	0.34%	13.93%	31.56%	0.77%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			Business Ownership							Total
			African American	Asian American/Pacific Islander	Hispanic American or Latino	Native American/American Indian	Nonminority Female	Non-M/WBE	Don't Know	
Q74-Prime Dropped MBE? * Business Ownership Crosstabulation	Yes	Count	71	8	6	1	11	8	1	106
		% within Q74	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		% within Business Ownership	16.14%	0.00%	0.00%	0.00%	6.79%	0.00%	0.00%	9.11%
	No	Count	348	75	84	3	146	356	8	1020
		% within Q74	34.12%	7.35%	8.24%	0.29%	14.31%	34.90%	0.78%	100.00%
		% within Business Ownership	79.09%	0.00%	0.00%	0.00%	90.12%	0.00%	0.00%	87.70%
	Don't Know	Count	20	3	6	0	6	3	0	38
		% within Q74	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		% within Business Ownership	4.55%	0.00%	0.00%	0.00%	3.70%	0.00%	0.00%	3.27%
Total		Count	439	86	96	4	163	367	9	1164
		% within Q74	37.71%	7.39%	8.25%	0.34%	14.00%	31.53%	0.77%	100.00%
		% within Business Ownership	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Appendix H

H. In-Depth Interview Guide

READ: Is this _____ (Company's name)? IF COMPANY NAME VERIFIED, CONTINUE.

Hello. My name is _____ with _____ (subcontractor org name) as a subcontractor to MGT Consulting Group. WSSC Water has retained MGT to conduct the current Disparity Study. We have contacted your firm to participate in an interview to gather information on your experiences, perceptions and points on doing business or attempting to do business with WSSC Water, its Prime contractors/vendors and the private sector. The purpose of this interview is to gather information on your experiences, perceptions, and points of view on doing business or attempting to do business with WSSC Water, its prime contractors/vendors, and the private sector.

Your company was randomly selected to participate in this in-depth interview. The interview will last approximately 45 minutes. If now is not a good time to complete this interview, when can we schedule time to speak in the next week?

Are you the owner or an authorized decision maker in your company? [IF NO] May I speak with that person? [IF NO, SCHEDULE CALL-BACK]?

IF TRANSFERRED TO ANOTHER PARTY (CFO, MANAGER, ETC): READ INTRO AGAIN then ask Are you able to answer questions concerning business practices of this company? IF YES, CONTINUE.

Thank you for agreeing to participate. Your input is very important to outcome of the disparity study. Your responses to this interview will be aggregated for the overall analysis and used only for this research study. Individual information or identifying characteristics about your company will not be published.

If you have any questions regarding the survey, I will be happy to provide you contact information at the end of the survey.

By participating in this interview, you acknowledge that:

1. The opinions and perceptions you will provide are given freely and represent an accurate reflection of your experience doing business or attempting to do business with WSSC Water.
2. You have not been coerced or received any remuneration for your comments.
3. You understand that neither your name nor your firm's name will be published in the report.
4. Your participation in this interview has no direct benefits to your firm or to MGT.

This is a great opportunity for you to provide feedback regarding your experience doing business with or attempting to do business with WSSC Water.

Thank you for your participation!

COMPANY INFORMATION

1. First, please tell me about your company. Tell me about the size of your company, the type of work you do, how many employees you have, how long you have been in business, etc.
2. How did you start your business? Why did you start your business?
3. How did you get into this kind of work? Why did you get into this kind of work?
4. What challenges did you face starting a business in your line of work?
5. Are there additional challenges for minorities or women starting businesses in your line of work in the Maryland/DC Area?
6. Have you or others experienced any barriers to entering your industry?
7. Have you changed the type of work you do over time? If so, why? For example, 10 years ago your company provided electrical only construction work, but today your company also provides plumbing and HVAC services.
8. Have there been any changes in the size of the firm over time?
9. Does your firm grow and contract based on seasons or bidding opportunities/contracts?
10. What is the race and gender of the business owner?
11. What certifications, if any, do you have? (examples, DBE, MBE, WBE, SLBE, etc.)
12. What determines the types and sizes of projects you will consider bidding on?
13. Do you work on both public sector and private sector work? Tell me more about your choice.
14. What are the key factors that contribute to your firm's success? (relationships, equipment, financing, materials cost, insurance, etc.)
15. What do you think is the most competitive advantage of a firm in your industry?
16. Tell me about your experience applying for credit for your business.
17. Have you applied for credit in the last year?
18. If, yes, why did you apply for a loan?
19. If, yes, were you approved? Did you receive the full amount requested?
20. If you were not approved, why do you think that is?
21. If you did not apply, did you feel discouraged from applying? If yes, why?
22. Did you experience any discrimination in the loan application process? If yes, please tell me about it.
23. On WSSC Water contracts, do you bid as a prime or as a subcontractor? Or both?
24. What led to your decision to bid as a prime (or as a sub or both)?
25. Is how you bid in the private market different from how you bid for public contracts or on WSSC Water contracts?
26. If so, how is it different?

PRIVATE MARKET EXPERIENCES

FOR PRIME FIRMS ONLY:

27. Do you make any efforts to include MBE/WBE/SLBE-certified firms on private contracts? If so, why? How? If not, why?
28. Do you use the same subs when you bid on private market contracts as you do on your bids for public projects? If no, why?

FOR SUBCONTRACTOR FIRMS ONLY:

29. Do primes who solicit bids from you on their public projects solicit bids from you for their private contract work? If no, why do you think that is?

FOR ALL FIRMS:

30. What barriers do you experience in trying to get work or in performing work on contracts in the private market? (If they can't think of any, ask about some of these: prequalification requirements, bond requirements, cost of bidding, etc.)
31. Have you experienced discrimination when trying to do business in the private market? If yes, please tell me about what happened.
32. Have you seen or experienced any unfair treatment or disadvantages for minority- or women-owned firms in your field?
33. Do you think there is a "good ol' boy" network operating in the market area? If so, how does it manifest? How does it impact competition?

WSSC WATER

34. How do you learn about bid opportunities for WSSC Water? Are there barriers to learning about prime or sub bidding opportunities?
35. Tell me about bidding for WSSC Water projects. Have you won?
 - a. If not, why do you think you were not awarded the project? If not, did you request a bid de-briefing? Why or why not? Did the de-briefing offer meaningful insight for areas to improve?
36. Were you treated fairly during the bidding process? If not, please tell me about that.
37. Tell me about working on WSSC Water projects.
38. Were you treated fairly when you were working on the project? If not, please tell me what happened.
39. What barriers to getting work with WSSC Water have you seen or experienced? (If they can't think of any, ask about some of these: prequalification requirements, bond requirements, short time to prepare bid, slow or non-payment, insurance requirements, etc.)
40. Have you experienced discrimination when trying to work or working on WSSC Water projects? If yes, please tell me about what happened.
41. Is there a level playing field for minority- and women-owned firms in your industry?

42. Do you think minority- or women-owned firms face challenges not faced by other businesses? Why or why not?
43. If there are any barriers or disadvantages for certified, minority- and women-owned firms, do you have suggestions for initiatives to address them?
44. Have you ever witnessed or experienced any of the following?
 - Slow or non-payment.
 - Denial of opportunity to bid.
 - Unfair rejection of bid.
 - Bid shopping.
 - Bid manipulation.
 - Double standards for minority- or women-owned firms when performing work.
 - Unfair treatment regarding approval of work for minorities or women owned firms.
 - Unfavorable work environment for minorities or women (e.g., harassment based on race or gender on jobsites).
 - Any “fronts” or false reporting of good faith efforts or use of certified subs.
 - Unfair treatment by WSSC Water.

FOR PRIMES:

45. How do you hire firms as subcontractors? How are they selected?
46. Do you make any efforts to include M/WBE-certified or SLBE approved firms in public contracts where there are not goals? If so, why?
47. Describe challenges or barriers that you might have faced when hiring and/or working with small, minority- or woman-owned businesses.
48. How are prime contractors/consultants encouraged to include subcontractors, M/WBE-certified or SLBE approved firms?

MBE and SLBE PROGRAMS

49. Please tell me about your experience with the MBE Program and/or SLBE Program.
50. What is your opinion about the effect of the MBE Program and/or the SLBE Program?
51. Does the MBE and/or the SLBE Program make it harder or easier to do business? How?
52. Without the MBE or SLBE Program, do you think small or minority and woman owned firms would be successful in obtaining work on WSSC Water projects? Why or why not?
53. Is your firm M/WBE certified or SLBE approved?
54. If an SLBE approved firm, tell me about the approval process. Was it difficult, confusing? Easy? Etc.

55. What advantages are there to being M/WBE-certified or /SLBE approved?
56. What disadvantages are there to being M/WBE-certified or SLBE approved?
57. What aspect of the MBE Program and/or the SLBE Program are most helpful?
58. What aspect of the MBE Program and/or the SLBE Program do you find the least helpful?
59. What business assistance and other programs does WSSC Water offer in its MBE Program and/or SLBE Program?
(assistance with bonding, mentor/protégé, financing, technical assistance, networking events, etc.)
60. Do you have any recommendations on how WSSC Water can improve the tracking and utilization of M/WLBE or SLBE -firms on WSSC Water projects and purchases?
61. In your opinion, what are the biggest obstacles faced by MBE or SLBE businesses in securing prime contracts or subcontracts with WSSC Water?
62. Is there anything else that you would like to share about WSSC Water, the MBE Program, the SLBE Program, or contracting with WSSC Water?

This concludes the interview. On behalf of WSSC Water, thank you for your participation.

If you have any questions or would like more information about the disparity study, please contact Andres Bernal at (850) 386-3191 or wsscdisparitystudy@mgtconsulting.com, or visit the study website at www.wsscwater.com/disparitystudy.

Appendix I

I. Stakeholder Interview Guide

INTRODUCTION

Hello, my name is _____ and I am with Chrysalis Collaborations. My firm is contracted with MGT Consulting Group to solicit input from area trade associations and business organizations for the WSSC Water Disparity Study. This study will examine the procurement of services and goods by WSSC Water, the implementation of its MBE, WBE, SLBE programs, and information about doing business in the public and private market. It is also important to include information from the local professional organizations that serve the business community, therefore we also conduct stakeholder interviews.

Your organization has been selected to participate in a stakeholder interview. During the interview, I will ask you to share information about 1) services you provide to your members or the general business community, 2) your relationship or interactions with WSSC Water, 3) issues or concerns held by your organization or your members regarding doing business or attempting to do business with WSSC Water or their primes, and 4) suggested recommendations to improve WSSC Water’s procurement process or MBE, WBE, SLBE program implementation.

I’d like to schedule a date and time to talk with you to conduct this very important interview. Our meeting should last about an hour. When can we schedule your interview?

Name of Organization:	_____	Industry Type:	_____
Date of Confirmation Call:	_____	Interview Date:	_____

Date of Interview _____

Interviewer's Name _____

Interviewee Information	
Organization Name	
Interviewee Name	
Interviewee Title	
Interviewee Phone #	
Interviewee Email	
Type of Organization	

1. Please describe your membership structure in terms of industry you represent, membership size, ethnic/racial makeup, etc.

2. Please discuss your organization's professional or business development program or services provided for your members.

3. [IF ORG IS NON-TYPE GROUP] Does your organization recruit MBE, WBE, SLBE firms as a part of your membership campaigns? If so, what are some of the methods you use?

4. In the industry your organization represents, what barriers are there to entry into self-employment?
 - a. Are the barriers different for firms that are owned by minorities or women than for firms owned by non-minorities?

5. Do you feel that minority, and women firms face greater challenges to operating and being competitive than non-minority firms? (receiving and maintaining insurance, bonding, and financing, cost of materials, etc.)
 - a. Please tell me more about that.

6. What do you consider to most interfere with your members ability to do business in the **private sector**? (barriers to doing business, such as licensing, “good old boy” network, financing, etc.)
 - a. What recommendations would you suggest on ways firms may overcome these barriers?

7. Does your organization have a working relationship or partnership with the WSSC Water? For example, work together to host events or share information, staff are members, etc.
 - a. If so, how do you work with the WSSC Water?
 - b. Which department(s) do you work with? (this includes any committees, councils, etc.)

8. What barriers do you feel your members face when doing business or trying to do business with the WSSC Water or their primes?
 - c. What are your recommendations on how firms can overcome these barriers?
 - d. What actions do you think WSSC Water can take to minimize barriers?

9. What is your general knowledge about WSSC’s procurement and contracting practices?
 - a. What are some of the most challenging aspects of the contracting practices your member face?
 - b. What recommendations do you have for improvements to the procurement and contracting practices?

10. Are you familiar with the various diversity (MBE, WBE, SLBE) program(s) administered by WSSC Water?
 - a. If so, what is your general knowledge about the program(s)?
 - b. Are you aware of any services offered your members under this program?
 - c. What recommendations do you have for improvement of the MBE, WBE, SLBE program?

11. Are there any other issues that you think are important for the study to address?
Why is the issue significant?

On behalf of WSSC, thank you for your participation in this interview. If you would like more information on the Study contact MGT Consulting Group, Mr. Andres Bernal at (850) 386-3191 or email at abernal@mgtconsulting.com. WSSC contact is Linda Mann at disparitystudy@wsscwater.com.

Appendix J

J. List of Trade Associations and Business Organizations

TABLE J-1.
TRADE ASSOCIATIONS AND BUSINESS ORGANIZATIONS

ORGANIZATION	INTERVIEWED
100 Black Men of Greater Washington, DC	YES
African-American Chamber of Commerce of Montgomery County	
Alliance for Hispanic Commercial Contractors - MidAtlantic	YES
Anne Arundel County Economic Development Authority	
Asian Pacific American Chamber of Commerce	YES
Associated General Contractors of Metro DC	YES
Baltimore Washington Corridor Chamber	
Black Chamber of Commerce - Anne Arundel County	
Bowie Business Innovation Center	
Calvert County Chamber of Commerce	
Calvert County Minority Business Alliance	
Capital Region Minority Supplier Development Council	YES
Center for Business Inclusion & Diversity	
Charles County Chamber of Commerce	
Charles County Minority Business Advocacy Council's	
DC Chamber of Commerce	YES
Georgetown University	
Greater Baltimore Black Chamber of Commerce	
Greater Baltimore Committee	
Greater Bowie Chamber of Commerce	
Greater Prince George's Business Roundtable	YES
Greater Washington Board of Trade	
Greater Washington Hispanic Chamber of Commerce	YES
Greater Washington Urban League	
Hispanic Chamber of Commerce of Montgomery County	
Howard County Economic Development Authority	
KoBE	
Laurel Board of Trade	
Maryland Black Chamber of Commerce	
Maryland Chamber of Commerce	
Maryland Commission on Indian Affairs	
Maryland Construction Network	YES

ORGANIZATION	INTERVIEWED
Maryland Department of Business & Economic Development	
Maryland Hispanic Chamber of Commerce	YES
Maryland Minority Contractors Association	YES
Maryland Procurement Technical Assistance Program (PTAP)	
Maryland Small Business Development Center	
Maryland Small Business Reserve	
Maryland Washington Minority Companies Association, Inc.	YES
Maryland-India Business Roundtable	
Maryland-National Capital Building Industry Association	YES
Minority Business Development Agency - Baltimore Business Center	
Minority Business Development Agency - Washington DC Business Center	
Montgomery County Department of Economic Development	
National Association for the Advancement of Colored People - Maryland Conference	
National Association of Minority Contractors - DC Chapter	YES
National Association of Women Business Owners - Baltimore Regional	
National Association of Women Business Owners - Greater DC	YES
National Association of Women in Construction - Baltimore	
National Association of Women in Construction - DC	YES
Northern Virginia Black Chamber of Commerce	YES
Prince George's Chamber of Commerce	YES
Prince George's Community College - Center for Innovation & Entrepreneurship	
Prince George's Contractors and Business Association	YES
Southern Maryland Black Chamber of Commerce	
The Enterprise Center	
The Links, Inc	
Towson University	
University of Baltimore	
University of Maryland	
University System of Maryland	
US Black Chambers, Inc.	
US Pan Asian American Chamber of Commerce	
Women Business Owners of Montgomery County	
Women Business Owners of Prince George's County	YES
Women Construction Owners & Executives, USA (WCOE)	YES
Women of Prince George's	
Women Presidents' Educational Organization- DC	YES
Women's Business Enterprise Council	YES