Gender Analysis of

Nontraditional Occupations

in the

City and County of

San Francisco Workforce

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Information Technology, Public Safety, and

Skilled Crafts

January 2017

Acknowledgments

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I. Overview

In 1998, San Francisco became the first city in the world to pass a local ordinance reflecting the principles of the United Nations Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW), also known as the "Women's Human Rights Treaty." The Ordinance requires City government to take proactive steps to ensure gender equality, specifying *gender analysis* as a preventive tool to identify and address discrimination. Since 1998, the Department on the Status of Women (the Department) had conducted a gender analysis of 11 City departments and programs and has helped the City remain informed, accountable, and purposeful in promoting the rights of women and girls.

In 2015, Mayor Edwin M. Lee laid out his goals for advancing gender equity in his State of the City address on a new "Shared Prosperity Agenda."

> If we are going to meet the challenge of gender equality for the next generation, we need workplace policies that empower women. In San Francisco, we've made progress… But we can and must do better in areas like information technology, public safety and skilled crafts—great jobs with good salaries, but which are not traditionally thought of as 'women's careers.'

Indeed, despite laws that prohibit discrimination and harassment, women are still underrepresented in traditionally male dominated occupations. Mayor Lee went on to commit his administration to identifying and eliminating the persistent barriers to gender equity in the City.

In accordance with the CEDAW Ordinance and Mayor Lee's gender equity goals, the Department focused this gender analysis on the fields of information technology, public safety, and skilled crafts within the City workforce.

The goals of this analysis are to:
- Analyze workforce data to measure the current status of women in these specific male dominated fields;
- Highlight the perspectives of women working in these fields; and
- Provide concrete recommendations to promote gender equity in the City workforce.

II. Methodology

A. Fundamental Questions
This report examines only certain departments of the City workforce, thus the analysis is not reflective of workforce demographics for all of the private and public sectors in San Francisco. Rather, this gender analysis offers information and recommendations for providing access and opportunities equally to both men and women.

The fundamental questions of this analysis are to what extent the City is implementing:
- Diverse and inclusive recruiting efforts;
- A gender-responsive culture in employment; and
- Equitable advancement for both men and women;

B. Definitions

When conducting a gender analysis, it is important to note the difference between a person's sex and a person's gender. Sex is the biological difference between women and men. Gender is a term that encompasses the roles and responsibilities of women and men that are created in families, social institutions, and cultures. It is also important to understand the difference between gender equality and gender equity. The terms are often used interchangeably, but they are not one and the same. Gender equality means that women and men enjoy the same status, conditions, and opportunities. Gender equity applies to the development of policies and the distribution of resources to redress historic discrimination and enable women to achieve full equality with men in practice. Equity can be understood as the means, and equality as the end.

A major challenge for employers like the City and County of San Francisco seeking to diversity their workforce is Proposition 209, adopted by voters in 1996, that prohibits "preferential treatment" on the basis of sex, race, or ethnicity in public employment, education, and contracting. This measure effectively bans Affirmative Action programs that were designed to bring greater ethnic and gender diversity in the workplace and college campuses. Employers have been forced to walk a fine line between proactive measures to recruit diverse candidates without running afoul of Proposition 209.

C. Data Analysis

Data presented in this report reflects employments recorded in the PeopleSoft Human Capital Management database as of June 2015, provided by the San Francisco Department of Human Resources (DHR). The 27,355 employments includes employees for all City departments, excluding elected and appointed officials and employments in the Municipal Transportation Agency (MTA), the School and College Districts and the Courts. In a change to the San Francisco Charter, the MTA handles its own human resource functions, including workforce utilization reporting. While it would be important to analyze the MTA workforce since many positions are nontraditional for women, staffing constraints precluded reviewing MTA data from this report and should be considered for future analyses. The school and college districts and the Courts are state agencies that do not fall under the purview of the DHR.

The focus of this report is on City positions in the fields of information technology, public safety, and skilled crafts. To define departments that fall within these fields, a review was conducted of the DHR, *2015 City and County of San Francisco Workforce Demographic Report*, as well as the *Equal Employment Opportunity Workforce Utilization Analyses* for 2005, 2008, 2013, and 2015. This review led to the following discrete categories of departments and positions.

- *Information Technology* covered technical positions in Information Systems (IS) and Information Technology (IT) (Appendix A).
- *Public safety* covered protective service workers in the departments of Adult Probation, Emergency Management, Fire, Juvenile Probation, Police, and Sheriff (Appendix C).
- *Skilled crafts* included construction trades (Appendix D).

Job categorizations may be different from those used in previous DHR reports.

Only data for classifications with more than 10 incumbents (n>10) were included because there were no gender or ethnicity breakdowns for job classifications with less than 10 incumbents. Also, when job classifications were all male or female, or had only one incumbent of the other, a best-case scenario of

at least one incumbent female or male per classification was used. This is illustrated whenever there is "1" in the dataset described in the appendices.

The City workforce labor market utilization rate was calculated by dividing the percent of women in the occupation among the City workforce by the percent of women in the occupation in the San Francisco labor market. San Francisco labor market data came from the American Community Survey 2011-2013 *3-Year Estimate on Occupation for the Civilian Employed Population 16 Years and Over*.

D. Interviews
To complement the DHR data, 26 individual interviews were conducted over a two-month period with women workers in various job categories (Appendix E). Interview questions covered entry to the field, past and present workplace conditions, and areas for improvement (Appendix F). This small sample size cannot generate statistically significant conclusions, but nonetheless, provides invaluable insight that informed the recommendations.

III. Findings

A. Information Technology
1. Background
    a. Historical Context
Women were the pioneers of computer science in the 1950s and entered the profession in large numbers over the next three decades. According to the National Center for Education Statistics, the number of women as a percent of all undergraduate computer science majors peaked at 37% in 1985. The number of women entering the computer science field then began to decline. By the mid-nineties, the percentage had dropped to 28%, and in 2010-2011, women accounted for just 18% of computer science undergraduate students.

There are many theories and studies that attempt to explain this drop. One popular explanation is that the first personal computers were exclusively marketed to boys and culturally reinforced as a male toy, hobby, and skill. This meant that the level of computing "experience" students had prior to college differed significantly with gender, even in an introductory class. In his 2010 book *Gender Codes*, Thomas Misa points out additional barriers, including patterns of discriminatory behavior that create an unsupportive classroom environment, gender differences in how students assess their own performance, the scarcity of role models, and the lack of a sufficient critical mass to sustain supportive peer communities. A female undergraduate from Harvey Mudd College, a leading undergraduate college for math, science, and engineering, explains, "A lot of universities have this kind of weed-out class…and they are shocked they don't get any women at the end. But the only people at the end are the people who have been in computer camp since they were five."

    b. Current Climate
In 2010, the U.S. Bureau of Labor Statistics projected a 12% growth in computer and information technology occupations between 2014 and 2024. Yet, given the current trends, the bulk of those jobs will be sought by men. This is directly correlated with the gender gap in education.

Female Students Interested/Enrolled in Computing Programs, 2015
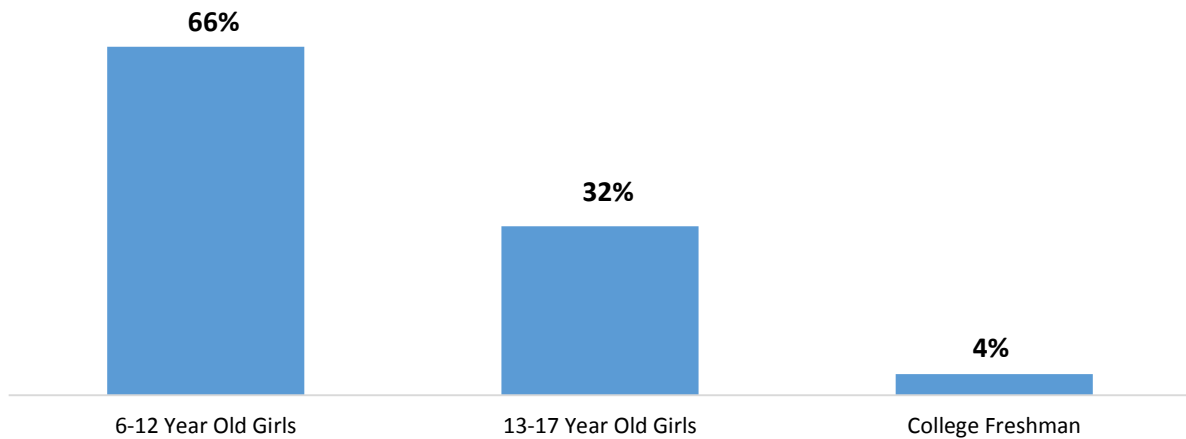
Source: Girls Who Code, 2015.

Reaching girls early is crucial. The number of students who take computer science in high school is a good predictor of numbers of college majors in computer science. Yet, according to the National Center for Educational Statistics, of all female high school students, just 14% took a computer science course compared to 24% male students. The College Board reports that the greatest gender disparity exists in Advanced Placement (college-level) computer science, where less than 22% of all students are female.

Many stakeholders are responding to this issue. According to Code.org, 28 states and the District of Columbia allow computer science to count as either a math or science graduation requirement. States like Arkansas and Rhode Island have passed legislation requiring all public and charter high schools to offer computer science courses. The San Francisco Unified School District has launched an initiative to expand computer science education to all students at all schools, beginning in pre-kindergarten and extending through 12th grade. The non-profit Girls Who Code aims to close the gender gap in technology early through after-school clubs, summer immersion programs, and partnerships with technology companies. At the university level, Harvey Mudd College acknowledged the skill gap in its *Introduction to Computer Science* class and now offers two versions, one for those with prior experience and one for those truly new to the field. Still, there is much ground to cover. The climate of women in tech is complicated, nuanced, and evolving. This brief overview provides a backdrop to the gender analysis of the City's gender inclusivity in technology occupations.

2. Data

Occupations in technology within the City workforce are defined as jobs related to advanced programming or data management systems. The data analysis is classified into two job type groups. These two job types, *Information Systems* and *Information Technology*, totaling 683 employees, are found in the 33 departments listed below.

Departments Included, N=33		
Airport Commission	District Attorney	Police
Adult Probation	Elections	Port
Assessor/Recorder	Emergency Management	Public Defender
Board Of Supervisors	Environment	Public Health
Building Inspection	Ethics Commission	Public Library
Child Support Services	Fire	Public Utilities Commission
Children, Youth & Their Families	Health Service System	Public Works
City Administrator	Human Resources	Retirement System
City Attorney	Human Services	Sheriff
City Planning	Juvenile Probation	Technology
Controller	Municipal Transportation Agency	Treasurer/Tax Collector

Source*: San Francisco Department of Human Resources.

Of the 683 technology positions in the International Federation of Professional and Technical Engineers Local 21, roughly 1 in 4 positions are occupied by women. The female computer science workforce utilization rate in the City is 133%. This means that the number of women the City employs in these two job categories exceeds the available labor pool in San Francisco by 33%.

City and County of San Francisco
Technology Workforce by Gender, 2015

Information Systems
N=504
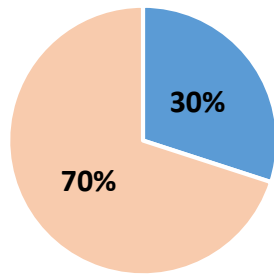
Information Technology
N=179
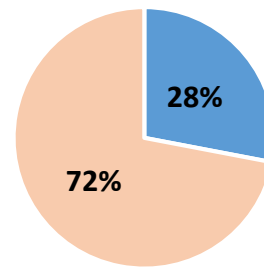
Source*: San Francisco Department of Human Resources, *City and County of San Francisco Workforce Demographic Report,* 2015.

In comparison to the private sector, the City workforce exceeds the private sector in the percent of women in technical positions. Among selected private sector technology companies in San Francisco, the percentage of women in leadership is greater than the percentage of women in technical roles within these companies.

Women in Selected Private Sector
Technology Companies, 2014

LinkedIn — Senior Leadership: 30%, Technical Roles: 18%
Twitter — Senior Leadership: 21%, Technical Roles: 10%
Dropbox — Senior Leadership: 21%, Technical Roles: 19%

■ Senior Leadership   ■ Technical Roles
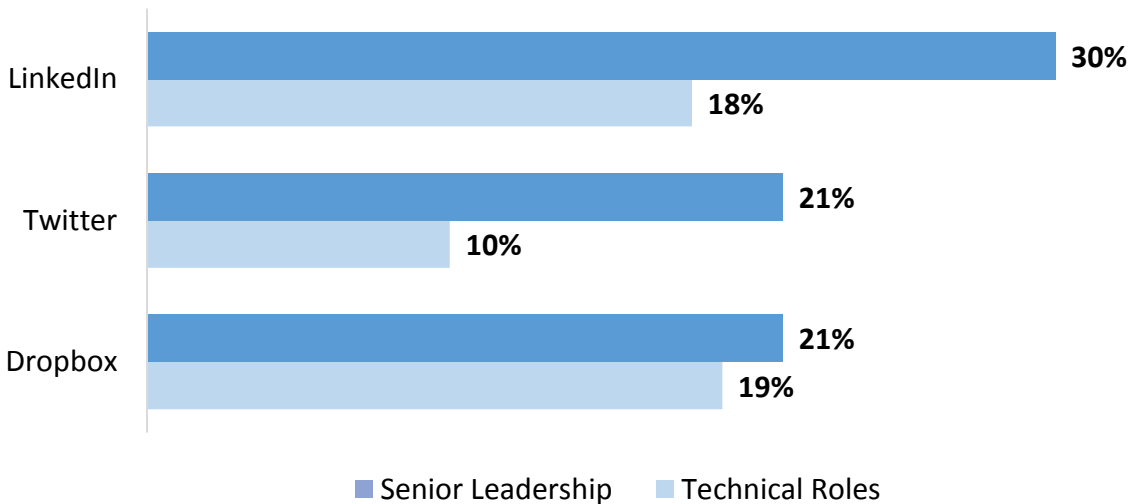
Source: *Dropbox, LinkedIn, Twitter Diversity Reports,* 2014.

3. Recruitment
   a. Private Sector Competition

Examples from the private sector illustrate that deliberate efforts can address the gender gap in technology. For example, when Airbnb analyzed its applicant and hiring data in 2016, the company found the proportion of female applicants was twice that of female employees. Airbnb responded by focusing on the conversion portion of their hiring. The company made the interview process more gender-blind by removing the names of applicants, and ensured that women were in the room during in-person interviews and presentations. As a result of these proactive measures, the overall ratio of female employees on its data science team doubled from 15% to 30% in 2015, and 47% of new hires were women. Other private technology companies have set aggressive recruitment efforts, including offering large referral bonuses, not to mention competitive salaries and benefits.

City departments should understand their mission and culture, what attracts people to join, and most importantly, what keeps people there. This way, agencies in the public sector will be able to attract talent that fits the culture and wants to grow there.

Another way that companies are able to attract people whom government agencies struggle to attract is through recruiting materials and using social media to appeal to millennials and other possible employees. The private sector dedicates resources to creating marketing materials customized to the target audience rather than using a one-size-fits-all approach.

Furthermore, the hiring process for governmental positions is much slower than in private companies. Oftentimes, private companies will recruit graduating university and graduate students early on, and make offers to them in November or December, up to six months before students graduate. Public sector hiring programs, on the other hand, can have deadlines as late as April, with an average hiring process of 100 days, so students do not know if they have the position until well after graduation. Government agencies may lose candidates who have received a job offer before graduation due to

earlier and more accelerated hiring processes in the private sector. According to an October 2013 Governing.com article by Mike Maciag, the public sector hiring process does not often update candidates as to where they are in the process, leaving them in the dark as they hunt for other job opportunities.

The matter of lower entry-level pay may make some young people less eager to join the public sector. Public sector employees also have a capped earning potential, as government executives are paid much less than their private sector counterparts.

Despite the positive qualities of a job in the private sector, there are many different but encouraging parts of a job in government. Companies can go out of business, whereas the government will always need employees. The public sector tends to offer more work-life balance than the private sector. While some private sector jobs offer generous benefit packages, public agencies consistently maintain benefits that include superior health care plans at affordable rates and favorable retirement plans. Public sector employees also receive federal holidays off and accrue leave time at an advantageous rate.

b. Applicant Pool

The women in the City workforce who were interviewed tended to share a similar pattern with women in the private technology sector: they were exposed to STEM from an early age, interacted with visible STEM role models (often relatives), and nurtured their passion for STEM *before* college. Understanding why women choose to join the City workforce or what may have compelled them to leave the private sector provides valuable insight into what female job applicants consider. Many interviewees highlighted mission and civic duty, explaining that they would prefer not to work for a profit-driven company and that working for the City makes them feel that they are making a difference. Interviewees also highlighted the security and stability, especially in the context of San Francisco where private companies may move locations or go out of business. Finally, interviewees identified competitive benefits, work-life balance, and family accommodations as additional incentives for employment with the City.

There are proactive efforts within the City to recruit women. The Department of Technology has set an example of proactively removing barriers of entry for women applying to its job openings, such as removing gendered language from its job postings and hiring a talent acquisition human resources specialist.

Rather than thinking about diversity in hiring at the very end…Our recruiter does that in the very beginning when he goes out to these events and different groups in the city. He actually goes out of his way to look for minorities and women, so that by the time we have a nice group of qualified candidates who we can bring in for interviews, they are already diverse.

—Female City Technology Employee

To recruit women beyond the traditional applicant pool, the City has also begun some forward-thinking initiatives. These initiatives include addressing diversity early in the hiring process, seeking women to serve on all interview panels, and collaborating with Girls Who Code to create a boot camp within the Department of Technology. The mission of the boot camp is to develop talent early, funnel graduates into City jobs, and ease the time and hurdles in applying.

It is noteworthy that, generally, women serve on interview panels and participate in the group hiring process for City jobs. However, challenges remain, including the fact that at times, women on the interview panel are not from the hiring department that is actually hiring. There are also still instances with far fewer women than men in the applicant pool, and more than one interviewee for this study reported being highly cognizant of racial diversity, but articulated they had not been as conscious of gender diversity.

The collaboration with Girls Who Code is also a promising start. The recruiting manager for the City and County of San Francisco's Department of Technology made a strong effort to improve the recruitment and hiring process by reaching out to Yes We Code, Girls Who Code, Yes Up, and female veterans groups.

[We need to] stress that technology isn't just coding. People envision "tech" as an isolated activity, but it's so much more than that. There's a lot of interaction, teamwork, and collaboration…
—Female City Engineer

According to U.S. Census data, the gender wage gap for women in computer and mathematical jobs nationwide is 16% and, in California, 17%. The wage gap for women in San Francisco is just 12%, although the percentage of women who hold computer and mathematical jobs in San Francisco is smaller at 23% than the state at 25% or nation at 27%. With a median salary of $87,950, women working in computer and mathematical jobs in San Francisco earn more than their counterparts in California ($72,509) and across the nation ($63,517). However, women in San Francisco have a median salary that is far less than the men whose median annual earnings exceed $100,000.

In comparison, the City technology workforce has a much smaller gender pay gap. Women in City technology occupations make 95% of what men earn. Among women in Information Technology positions, their median hourly wages are *identical* to men's median hourly wages. While women in Information Systems (IS) positions in the City workforce earn 91% compared to men, the gender wage gap virtually disappears when looking at specific job classifications. For eight out of the nine IS positions included in the study, women's median hourly wages are *exactly the same* as men's and in the one other classification, women have a gender wage gap of just 2%.

Computer and Mathematical Jobs, 2010

	Median Male Wage	Median Female Wage	Wage Gap
United States	$75,312	$63,517	16%
California	$87,708	$72,509	17%
San Francisco	$100,159	$87,950	12%
City Workforce	$56.58 (per hour)	$53.61 (per hour)	5%

Source: 2010 U.S. Census and San Francisco Department of Human Resources.

The lack of a gender wage gap in the City workforce is likely due to the step system for wages of each position. For technology positions, the median annual wage at the lowest step is $97,097 while the median annual wage at the highest step is $121,394, with a range of $53,508 to $163,384. When an individual is hired, the pay is set to step 1 unless a previous salary exceeds that amount and step increases are awarded annually thereafter until the top step (step 5) is reached, at which time the individual's wages hit a ceiling for that job classification.

Similar to the City, Google implemented a system in 2015 to eliminate the "anchoring bias" that can occur when hiring a new employee. Hiring managers often ask what the interviewee's current salary is,

and use that as a baseline number, or "anchor," with which to calculate the salary the employee will receive for her/his new position. However, this means that women who are already underpaid compared to men in the same position will make less than their male counterparts in perpetuity. Instead of anchoring the new salary to an employee's previous salary, Google calculates pay targets based on industry standards to eradicate any bias rooted in prior compensation.

4. Retention
Numerous studies show that many women do not stay in technology roles. A 2014 report from the Center for Talent Innovation found that U.S. women working in science, engineering, and technology fields were 45% more likely than their male peers to leave the industry within the year. A 2011 National Science Foundation-funded study surveyed 5,300 women who had earned engineering degrees, and 38% of them had left the field of engineering. Women referenced the "old boys' club," hostile work environments, and few opportunities to advance or develop as the reasons for leaving the field.

   a. Culture
According to a 2014 University of Wisconsin-Milwaukee study on women in engineering, many women who have left the engineering field cite the male-dominated culture as one of the main reasons they decided to leave. Women note the majority male leadership tends to hire and promote other men rather than equally qualified women candidates. Instead of fighting the uphill battle of changing the culture of engineering or technology companies, women often change fields. The study, which took place over 3 years, found that only 17% of women left engineering because of caregiving reasons, dispelling the idea that motherhood plays a larger part in preventing women from advancing in their careers than an unsupportive work culture. The study also points out that many of the women who did leave work to care for children chose to do so because their companies did not offer flexible enough work-life or paid leave policies. The Society of Women Engineers also conducted a retention study in 2009 and found that work-life balance is a significant issue that leads women to leave the field of engineering.

I've encountered a lot more resistance because of my gender here [in the public sector].
—Female City Technology Employee

I always felt that the city was diverse-- a good place for women and minorities compared to my girlfriends in other industries and in private companies.
—Female City Technology Employee

Female City employees interviewed for this report had mixed responses to questions about how culture affects retention. Some experienced or witnessed gender discrimination while others said they found the City to be the ideal workplace for women. Since only 26 interviews could be conducted for this study, it would be important to conduct further interviews and focus groups to better understand the current workplace culture at City departments.

b. Advancement

The City employees interviewed for this study had a range of perspectives on advancement opportunities. While some felt they had flexibility to choose the field in which they were most interested, others described a lack of career advancement paths for employees of any gender. The latter group reported that employees work years before advancing, move classifications in order to advance, or believe their current titles do not accurately reflect their position's responsibility. Interviewees stated that a clearer career path would better incentivize employees. Other women placed the onus on young women themselves and advised those women to be proactive in seeking appointments and advancement.

> *I tell younger women that a lot of the time, although you don't see a career path, what you can do is carve out a path for yourself.*
> *—Female City Technology Employee*

LeanIn.org's 2016 *Women in the Workplace* study identified a variety of obstacles that may prevent or adversely affect women's desire or opportunity to advance in their career. The study found that women are promoted less frequently than men. At the first step to manager, for every 100 women promoted, 130 men are promoted. This is likely the result of the fact that there are generally also fewer women in line roles than men, with more women shifting from line roles to staff roles over time. Yet, those in line roles have a much greater likelihood of reaching top executive positions than those in staff roles.

In terms of racial inequality, women of color make up 20% of the U.S. population but hold only 3% of executive-level positions. They are also 21% less likely than white women to think that the most deserving employees receive the best opportunities. Many companies themselves do not prioritize racial diversity. The study found 55% of companies reported racial diversity, as compared to 78% with gender diversity, as a top priority. Lastly, the study indicates that the more work a person does at home, the less interested she is in becoming senior leadership. Only 34% of women who do a majority of housework and child care aspire to be top executives, versus 43% of women who share responsibilities evenly with their partner. With a majority of household and child care responsibilities still falling on women, the issue of work-life balance may dissuade or prevent women from advancing in their careers.

B. Public Safety
1. Background
   a. San Francisco Police Department

In 1973, the San Francisco Police Department (SFPD) was scrutinized for its recruitment and hiring practices and for failing to reflect the make-up of the city in its workforce. At the time, the police force consisted of 14% minority groups and 4% women, as compared to 29% minority and 52% women in the general San Francisco population (U.S. Census, 1970). A lawsuit brought by Officers for Justice, later joined by the U.S. Department of Justice, alleged that the SFPD engaged in a pattern of employment discrimination based on race, sex, and national origin. The lawsuit was settled by a consent decree in 1979, which required the City to employ good faith efforts to achieve particular goals for the employment of women and minorities in the SFPD and prohibited the use of methods of selection that had an adverse impact on women and minorities unless the City proved they were valid under the Uniform Guidelines on Employee Selection Procedures, 28 C.F.R. 1607.

According to the National Center for Women & Policing (NCWP), consent decrees have a significant positive effect on increasing women in sworn law enforcement. This finding held true in San Francisco. As a result of the consent decree, the SFPD made a deliberate effort to recruit minorities and women

with a large degree of success. The rate of minorities nearly tripled, and the rate of women quadrupled over the consent decree period from 1979 to 1998.

Minorities and Women in the
San Francisco Police Department, 1979-2015
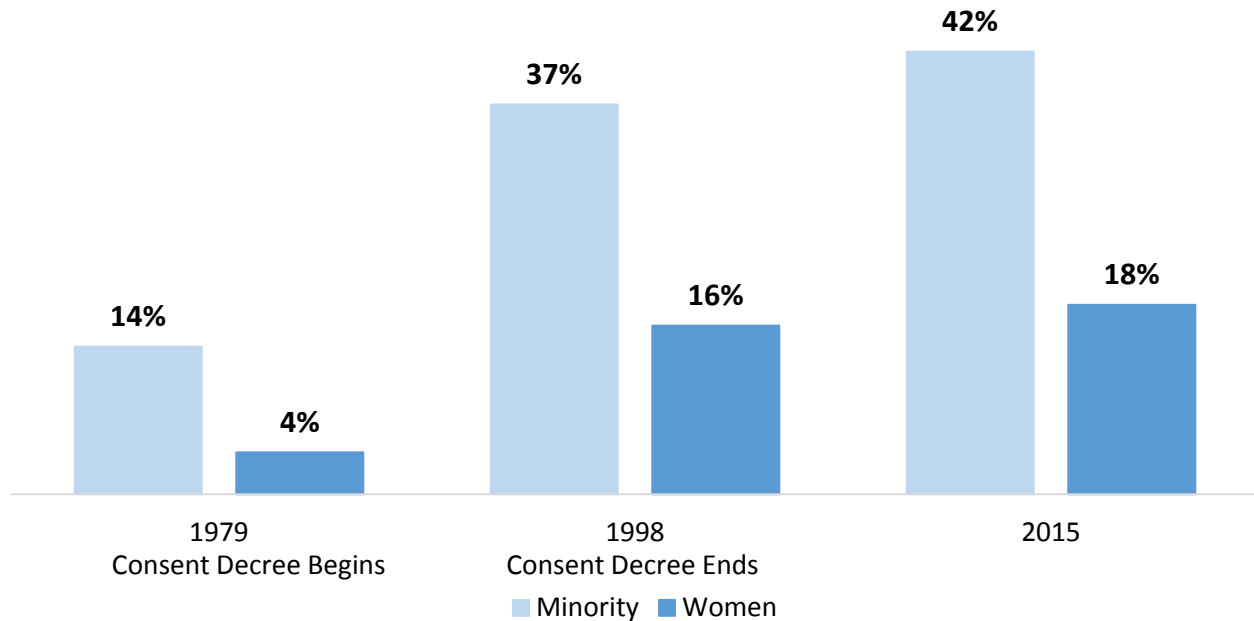
Sources: *San Francisco Chronicle*, "S.F. Police Dept. Consent Decree Expected to End," October 2, 1998. San Francisco Department of Human Resources, *City and County of San Francisco Workforce Demographic Report,* 2015.

The NCWP also found that once a consent decree ends, progress often slows. This has proven to be true in San Francisco, where the rate of minorities and women has markedly slowed since the decree ended.

> *b. San Francisco Fire Department*

The San Francisco Fire Department (SFFD) faced a similar lawsuit of its own. Women had been barred from applying until 1976, and the first woman firefighter was not hired until August 1987. Citing unlawful discrimination on the basis of race, there were multiple class-action suits filed against the City and County of San Francisco beginning in the 1970s that culminated in a 1988 lawsuit. Additional individuals and organizations later joined as plaintiffs, adding claims for unlawful discrimination on the basis of gender. As a result of the lawsuit, a consent decree was imposed on the SFFD in 1988 that mandated a 40% minority and 10% female workforce. The SFFD then embarked on a major overhaul of entrance and promotional exams, and women entered the ranks of lieutenant, captain, and battalion chief. In 1997, when the consent decree was lifted, minorities and women represented nearly 35% and 7% of the workforce, respectively. Then-Fire Chief Robert Demmons reported that in the 10-year period between 1987 and 1997, minorities composed 61% of new hires and women accounted for 20%.

2. Data

In the City and County of San Francisco, women represent 24% of all employment in public safety departments. Although 24% is far from parity, many women and minorities have joined public safety within the last 30 years. Currently, women hold or recently held chief positions in most of San Francisco's public safety departments including Adult Probation, Fire, Emergency Management, Police,

and Sheriff. There is also at least one woman at the command level in each of these public safety departments.

**City and County of San Francisco
Public Safety Departments by Sex, 2015**
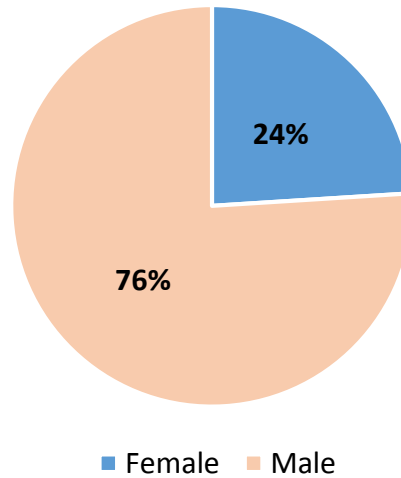
24%

76%

■ Female ■ Male

Source: San Francisco Department of Human Resources, *City and County of San Francisco Workforce Demographic Report,* 2015.

The following graph shows an adjusted dataset including only protective service job types with categories n>10 from City employment recorded in 2015 (Appendix B).

**City and County of San Francisco Public Safety Departments
by Sex, 2015 (Selected Job Types, n>10)**
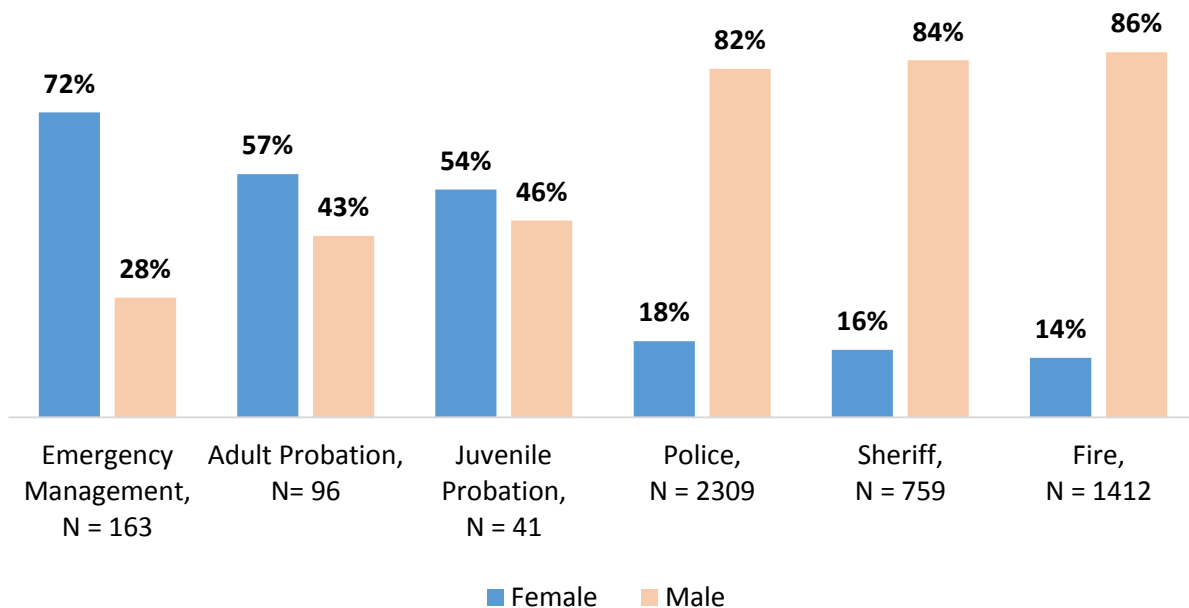
	Emergency Management, N = 163	Adult Probation, N= 96	Juvenile Probation, N = 41	Police, N = 2309	Sheriff, N = 759	Fire, N = 1412
Female	72%	57%	54%	18%	16%	14%
Male	28%	43%	46%	82%	84%	86%

■ Female ■ Male

Source: San Francisco Department of Human Resources, *City and County of San Francisco Workforce Demographic Report,* 2015.

The following graph shows the change in percent of female employees in public safety departments over a 10-year period.

City and County of San Francisco Female Employees In Public Safety Departments, 2005-2015
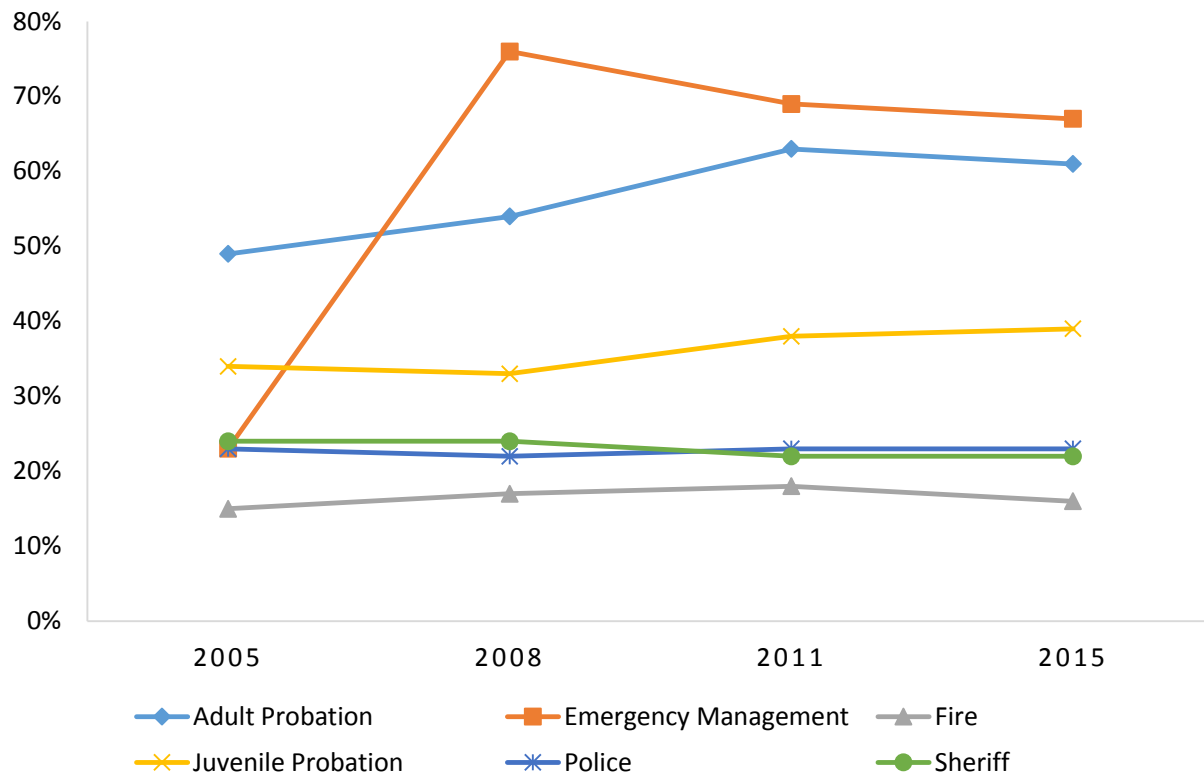
There were significant increases in female employment percentages in Adult Probation from 49% to 57% from year to year, and Emergency Management, from 23% to 67%. Juvenile Probation increased slightly over the past 10 years, while Fire, Police, and Sheriff maintained or decreased slightly during the same time. The leap in Emergency Management is explained by 2006 legislation which combined the Emergency Communications Department and the Office of Emergency Services into one agency, the new Department of Emergency Management.

Since Fire and Police had the largest gender disparities, those departments were prioritized for analysis and interviews. The U.S. Census American Community Survey provides estimates of occupation by sex for full-time, year-round civilian employment. These estimates indicate the number of available women in a local workforce, such as San Francisco, which can be compared to the number of women in the City workforce to arrive at the City's labor market utilization rate. Based on these figures, the City and County of San Francisco utilizes 80% of the locally available workforce in public safety. Similarly, while a labor market utilization rate of 80% appears low, the SFPD has greater gender diversity than police forces in many other major cities. According to the U.S. Bureau of Justice Statistics, the San Francisco police force ranked ninth out of 14 large cities for the number of female full time sworn officers in 2007.

The SFFD has one of the highest percentages of female firefighters of all urban fire departments in the nation as of 2014. New York, far greater in size and density, had less than 1% female firefighters.

Female Firefighters in Large City Fire Departments (Sworn Officers), 2014
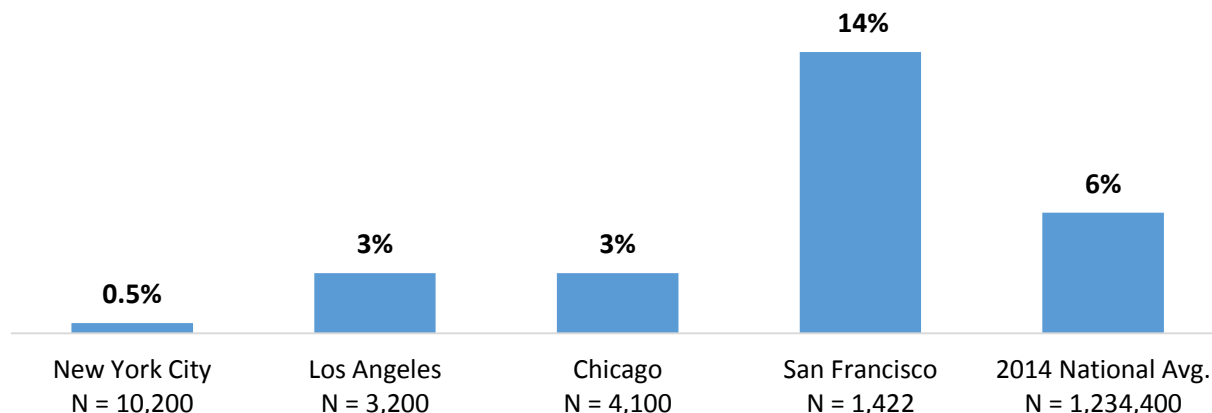
Source: National Fire Protection Association, 2014.

3. Recruitment
a. San Francisco Police Department

The number of women applying and joining the SFPD has been rising. Some areas of the SFPD website have been updated to reflect diversity and inclusivity, while other areas of the site reflect remnants of a male-dominated police force. According to Police Academy data from 2016, men are enrolled at rates four times greater than women, yet women tend to have higher graduation rates. Women were consistently 50% or more of the graduation class (monthly) within the last year.

As of August 2016, the SFPD is understaffed by around 200 officers. A lieutenant noted that the current controversial climate throughout the country has left people less likely to apply to be a police officer. They launched a social media campaign called "We Are SFPD" in order to recruit new officers, especially women and people of color. In 2015, the SFPD held recruitment workshops to inform women interested in joining of what it takes to be a female officer.

Physical agility tests can reinforce the idea of policing as being merely a matter of masculine traits like toughness and strength, rather than the communication and dispute resolution skills needed in non-criminal and service work, which accounts for a majority of policing. Women bring assets like interpersonal and communication skills and the ability to facilitate cooperation and trust to police forces. The 2003 NCWP report, *Hiring & Retaining More Women: Advantages to Law Enforcement Agencies*, cites that both domestic and international research indicate that women officers are less likely to be involved in excessive force cases and are better at de-escalating or defusing potentially violent citizen encounters than their male counterparts. Given efforts to implement community-policing models around the country, female applicants may be more successful when measures of interpersonal, communication, and dispute resolution skills play a central role in evaluating a potential officer's effectiveness.

b. San Francisco Fire Department

Firefighter positions have traditionally been highly desirable and competitive. While there was no shortage of candidates, the recruitment process underwent a significant change in 2013. The traditional model had required extensive time for both applicants and human resources, and therefore tests were held every four years. This proved restrictive to prospective applicants. The DHR, with approval from the Civil Service Commission, adopted a continuous testing model to increase the quality and diversity of the applicant pool. Despite these improvements, the current percentage of women in the SFFD is dropping. This is in part because many of the women hired in the 1980s during the consent decree are now retiring, as well as likely being the effect of operating for over 10 years without a Recruitment Unit due to budget constraints. Fortunately, a Recruitment Unit has been established as of 2016. Female firefighters interviewed for this analysis expressed that recruiting efforts still appeared traditional, with an emphasis on seeking out the physically fit. They felt that female candidates from a variety of backgrounds, with qualities like mental agility and emotional resilience, would be ideal candidates as well.

The exam is now administered by the National Testing Network (NTN), ensuring a high quality national standard. The test includes a video-based human relations test, a mechanical aptitude test, a math test, and a reading ability test. While the mechanical, math and reading parts of the exam are pass/fail, the human relations part of the exam is scored and considered the most important part of the exam because ranking on the NTN list is determined by one's performance on the human relations component. According to a memorandum on the new method of testing, "[s]tatistics show the best firefighters are those who have great human relations skills." Human relations skills are often considered "feminine" or "soft" skills, so the fact that the new firefighter exam is largely focused on this type of aptitude means that more women may be able to pass the exam and succeed as firefighters, rather than when physicality was considered the key aspect of firefighting. There is still a candidate physical ability test to determine each candidate's physical fitness, but the human relations test is cited as the best indicator in predicting who will be the highest-quality firefighters.

> *We don't look in the right places…I think they miss the mark on female recruitment.*
> *—Female Firefighter*

Fire Chief Joanne Hayes-White added that while human skills are important, the physical nature of the job cannot be underestimated: "The ability to perform physically demanding tasks in emergency incidents remains critical in [this] profession." She stated that the SFFD "appropriately recruits individuals in protected categories from a variety of life areas where fitness, discipline, and/or teamwork are demonstrated and within which human relations are generally part and parcel."

In addition to a shortened wait time between applying and testing, candidates are now able to apply for the position of Firefighter "online in the comfort of their own home through the Department of Human Resources website" according to Chief Hayes-White. This added flexibility is meaningful for women and others who may have caregiving duties and complicated schedules. Although the Firefighter examination must be taken at specified testing sites, increasing the flexibility of the initial application process broadens the candidate pool and benefits everyone, including non-traditional candidates such as women.

In the Fire Department Gender Analysis (2014) conducted by the San Francisco Department on the Status of Women, Fire Chief Hayes-White specified the strategies that the SFFD has employed to increase the number of women applicants and firefighters. She noted two programs that engage many

women: "The Neighborhood Emergency Response Team (NERT) Program…has, to date, trained 23,000 people with a free, 18-hour curriculum available in Cantonese and Spanish, and the SF Firefighters and Safety Education program [has] 40 active volunteers deliver K-5 fire safety curriculum in the public schools."

At the time of the 2014 report, Chief Hayes-White reported that the Fire Department was 52% minorities and 16% women, exceeding consent decree goals for a force of 40% minorities and 10% women. This not only marked an improvement from 20 years ago, but also from the national statistics of 5% women firefighters reported by the 2010 U.S. Census. Importantly, as one of the fire departments with the largest proportions of women in its ranks nationally, the U.S. Department of Labor selected the San Francisco Fire Department to participate in the study "Promising Practices for Increasing Diversity Among First Responders." The SFFD's selection was attributed to its noteworthy diversity statistics, which are among the top five in the nation.

4. Retention
    a. Culture
Female interviewees shared their insights into the past and present culture of the Police and Fire Departments. In the past, interviewees reported feeling welcome when they joined, but had heard stories of discrimination elsewhere. Interviewees were often the only women on their shifts and would only see other women when they were replaced at the end of their shifts. While many felt accepted, they referenced the existence of the boys' club based on male camaraderie and male bonding. Women also faced challenges due to the lack of private changing rooms or bathrooms. Some interviewees stated that they experienced discrimination and harassment.

I don't remember any negative experiences as a woman, nothing stood out to me. But again, when you start out, your focus is to learn the job and survive.
—Female Firefighter

The interviewees cited progress such as improved facilities, private locker rooms, and bathrooms, more women in leadership and more female role models, more than one woman on a shift, and respect for family and work-life balance. They noted, however, a number of persistent problems, including the following: the natural tendency of male camaraderie; women still feeling like they have to "prove

We paved the way. There is so much more support now than there was when I started.
—Female Firefighter

themselves" beyond what is expected of them; the need for more female mentorship; a more subtle discrimination in the field that is different than in leadership; an acceptance of a degree of sexism; and hesitancy to report issues because of retaliation and a preference to mediate things privately without triggering Human Resource protocols.

    b. San Francisco Fire Department
There are a substantial number of sexual harassment lawsuits filed by female firefighters around the country and San Francisco's has not been immune. Although many interviewees felt that the environment had improved since they first entered the Fire Department decades ago, a recent case was filed in 2016 by a San Francisco female firefighter describing a campaign of gender-based intimidation and harassment by some of her male colleagues at the fire station. Fire Chief Hayes-White responded strongly by removing all 10 of the officers at the station and requiring all personnel to sign a pledge of understanding of the workplace harassment free policy. The Chief herself noted that she experienced

some harassment from male firefighters when she first began in 1990. Incidents such as this indicate that the male-dominated culture has not ended since women were first allowed in the SFFD 30 years ago.

> *Certainly had to earn your way…you had to put up with some teasing, catcalling some things like that. I honestly didn't let it bother me.* —*Female Firefighter*

However, the prominent voice of the Fire Chief condemning this problem sends a strong message throughout the SFFD that the harassment of female firefighters will not be tolerated.

While some family-friendly policies exist in the SFFD, there is room for improvement. According to Chief Hayes-White, "Pregnant women are offered temporary assignments, and may return to work after 6 weeks of the child's birth with a light work load." However, like other public safety agencies in the City, there are no provisions for child care, so working mothers (and fathers) rely on each other by coordinating schedules for caregiving. Since child care responsibilities fall disproportionately on the shoulders of mothers, the SFFD should explore offering some level of child care support in order to retain more women. This could range from partnering with the Children's Council of San Francisco for referral information to licensed child care facilities to offering child care subsidies to securing dedicated child care slots. In addition, the Chief explained the City's benefits for new parent employees that goes far beyond what other cities offer:

> [T]he City has a generous package under the Paid Parental Leave Benefit, which provides up to 12 weeks of paid child bonding time at birth, and an additional 4 weeks if the child-bearing parent experiences a temporary disability. The City also provides a full year of Family Care Leave, which can be used continuously or intermittently, and paid after the Parental Leave Benefit through the employee's time balances. Within the child's first year, parent employees have the opportunity to explore and obtain arrangements that are suitable to their particular family situation.

c. San Francisco Police Department

According to the 2003 study by the National Center on Women and Policing (NCWP), women typically become police officers for many of the same reasons that men do, including high wages, the challenges specific to the job, and the opportunity to assist others. However, the motivations behind women leaving the field are often different than men's. For example, women tend to have more problems with co-worker gossip, lack of promotional opportunity, work-life balance challenges, and administrative policies that disadvantage female officers. Through a 1999 analysis of one large Midwestern municipal police agency by Whetstone and Wilson, the researchers determined that personal "choices" both inside and outside the organization limited women's decisions to enter the promotional process. Female officers noted that overtime pay would likely be insufficient to cover additional child care expenses incurred on the evening or night shift. Furthermore, it is not surprising that as many as 68% to 86% of female police officers have experienced sexual harassment, given the fact that sexual harassment is much more likely to occur in male-dominated workplaces and in fields that have been traditionally considered masculine (NCWP, 2003).

d. Advancement

The women interviewed for this report generally felt that despite issues, a job in public safety is highly regarded. Once women are in the field, they tend to stay in the field. However, some interviewees knew of women who quit the field because of uncomfortable situations. Women may face challenges in which they are placed in one role and are less likely to be promoted, and thus have less experience than male colleagues who have worked in a variety of settings. Due to this issue, interviewees desired more transparent placements and cross unit placements. Even with advancement, some interviewees noted that there can be even more sexism towards a woman the higher in rank she goes.

C. Skilled Crafts

1. Background

In the 1970s, women were prevented from joining a local San Francisco carpentry union. In the 1980s, Bay Area tradeswomen activists enlisted the help of the Equal Rights Advocates and the Employment Law Center to file a gender discrimination lawsuit, which resulted in a consent decree where federally funded jobs had the goal of hiring 6.9% women, rising to 9% over 5 years. Many women hired from the consent decree remained in skilled crafts until retirement. According to the National Women's Law Center's (NWLC) 2014 report on women in construction, only 2.2% of apprentices in the U.S. construction trades are women. The City, on the other hand, shows stronger numbers: In the last 5 years, out of 3,398 of the San Francisco resident trade workers who have worked on publicly funded job sites, 10% were women.

The construction sector is expected to see a 32% increase in employment opportunities in San Francisco, leading to an estimated 4,000 new jobs. These jobs are well-paid and do not require a 4-year college degree. According to the NWLC's 2014 report, women in women-dominated fields such as home health aides, maids, housekeepers, and child care workers make about half of what women in construction and trades positions make. Eliminating obstacles for women who want to enter skilled crafts will allow increased numbers of women to obtain well-paying jobs.

2. Data

According to the *San Francisco Workforce Strategic Plan, 2013-2017*, the skilled crafts are traditionally male-dominated. The following graph reflects a dataset including only skilled crafts job types with classifications that have 10 or more City employees (Appendix D).

Skilled Crafts Workers by Gender, 2015
(Selected Job Types, n>10)
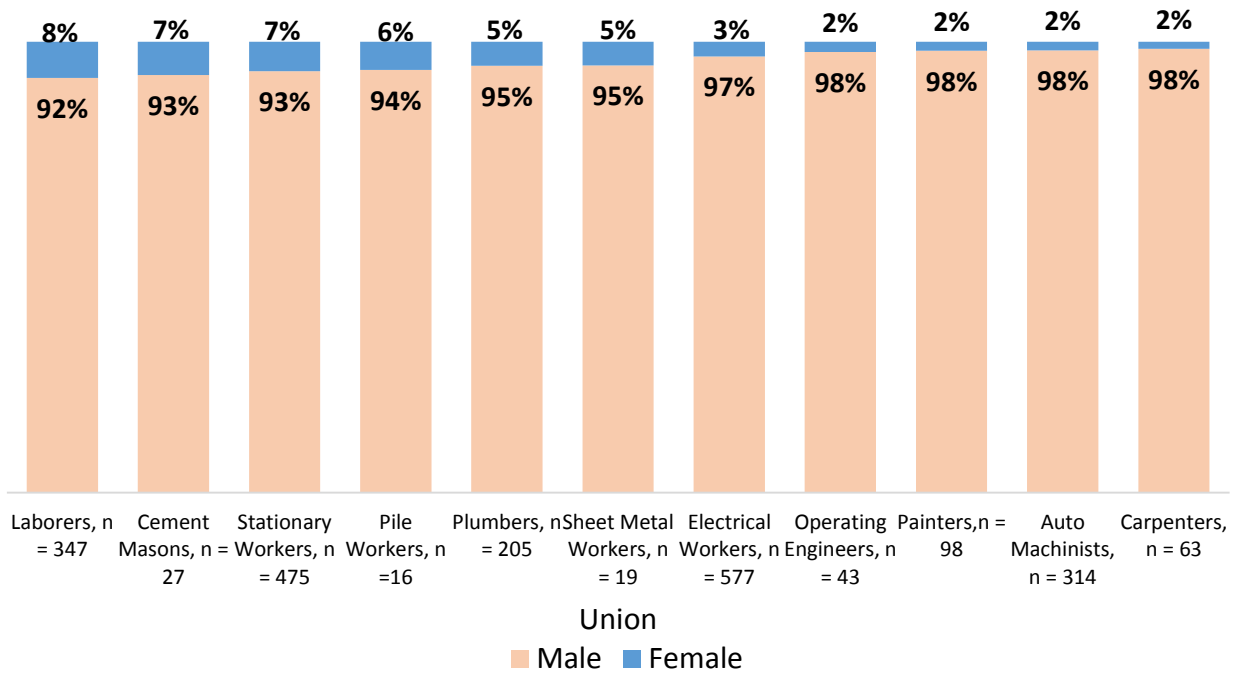
	8%	7%	7%	6%	5%	5%	3%	2%	2%	2%	2%
	92%	93%	93%	94%	95%	95%	97%	98%	98%	98%	98%

Laborers, n = 347 | Cement Masons, n = 27 | Stationary Workers, n = 475 | Pile Workers, n =16 | Plumbers, n = 205 | Sheet Metal Workers, n = 19 | Electrical Workers, n = 577 | Operating Engineers, n = 43 | Painters, n = 98 | Auto Machinists, n = 314 | Carpenters, n = 63

Union

■ Male ■ Female

Source: San Francisco Department of Human Resources, *City and County of San Francisco Workforce Demographic Report,* 2015.

In every skilled crafts classification in the San Francisco City workforce, the large majority is male. The highest female employment percentages are within the laborers at 8%, cement masons at 7%, and stationary engineers at 7% female. The classifications in the operating engineers, painters, auto machinists, and carpenters unions have the lowest percentage of women at merely 2% each.

Using numbers for the best-case scenario, the utilization rate is 245% for women in construction occupations in the City. Overall, women make up 2% of construction occupations in San Francisco but 5% of construction occupations in the City workforce. The worst-case scenario is a utilization rate of 176%, with women in 3% of construction jobs in City. This fluctuation is due to the number of positions where the best-case scenario was added of at least one incumbent female or male per classification when job classifications were either all male or female or had only one incumbent of the other sex.

The following graph shows the City skilled craft workforce by sex and race/ethnicity.

City and County of San Francisco Skilled Craft Workers by Sex and Race/Ethnicity, 2015

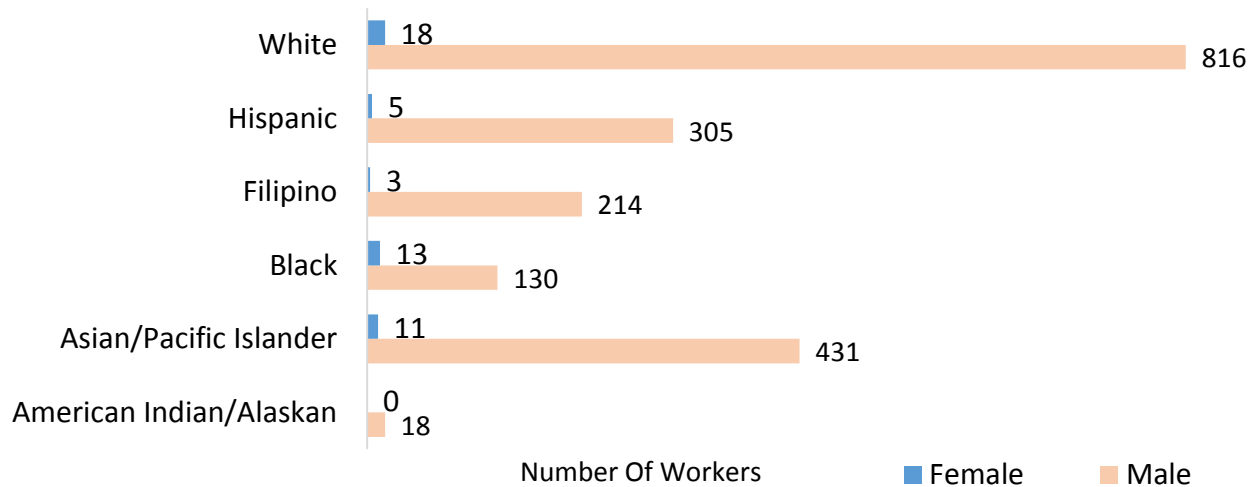| Race/Ethnicity	Female	Male
White	18	816
Hispanic	5	305
Filipino	3	214
Black	13	130
Asian/Pacific Islander	11	431
American Indian/Alaskan	0	18

Number Of Workers

Source: San Francisco Department of Human Resources, *City and County of San Francisco Workforce Demographic Report,* 2015.

The majority of skilled crafts workers are White males at 42%, followed by Asian and Pacific Islander males at 22%, and Hispanic males at 16%. While the numbers are small, diversity is greater among the few female skilled craft workers, with White women at 36%, Black women at 26%, and Asian and Pacific Islander women at 22%. In comparison, San Francisco's construction workforce is 39% Hispanic males, 32% White males, 26% Asian males, and 3% Black males. Asian women make up 37% of construction occupations in San Francisco, White women at 27%, Hispanic women at 23%, and Black women at 13%.

3. Recruitment
   a. Applicant Pool
Like Information Technology and Public Safety, women interviewees in this sector also reported having relatives who had been employed in these fields and, as a result, had early exposure to a favorable view of the profession. Many of these women had transitioned from retail, administrative, and corporate jobs and cited a desire for more fulfilling and hands-on work. Interviewees suggested that other women were unaware of the advantages to a trades profession. They also explained that job postings in the City proved challenging. For example, despite the initiative to hire more women in the trades, postings sought applicants who already had specific job skills, which few female applicants would possess.

Outreach to women about careers in the construction industry has been inadequate to recruit increased numbers to apprenticeships or positions. A 2013 Institute for Women's Policy Research (IWPR) survey determined that most women in the trades found out about construction careers by friends and family, rather than at career fairs or from career counselors. In a 2012 study by Mathematica Policy Research, female apprentices offered some changes to promote women's success in apprenticeship programs. These changes included targeted outreach and information, support for basic skills development, assistance with child care, further efforts to combat harassment, and facilitating peer support. They viewed the residential apprenticeship as a pathway to career advancement and higher pay, but desired a more flexible program to support women.

Girls and women need to receive equal outreach to boys and men about opportunities in nontraditional fields such as skilled crafts. Schools, career counseling services, and job centers do not often target women for these careers and apprenticeship programs. Funding for programs that provide apprenticeship readiness training and outreach for women has not increased since the early 1990s (IWPR, 2013). Increased monitoring, investigation, and education by the Equal Employment Opportunity Commission, the Office for Federal Contract Compliance Programs, and state enforcement agencies would help reduce hiring discrimination by contractors and unions.

According to the IWPR study, the construction industry has consistently failed to meet hiring targets for women. For example, in 1978, construction companies with federal contracts had a goal of employing a minimum of 7% women and targeting 21% women for residential apprenticeships (half of women's share of the workforce at the time), but did not meet either of these goals. The percentage of women in construction jobs has remained stagnant at less than 4% for 40 years (U.S. Department of Labor, 2014). In most other nontraditional industries, the proportion of women more than doubled since the early 1980s, whereas in construction, the percentage moved from 2% in 1983 to just 3% in 2012.

Women's Share of Nontraditional Occupations: 1978-83 and 2012
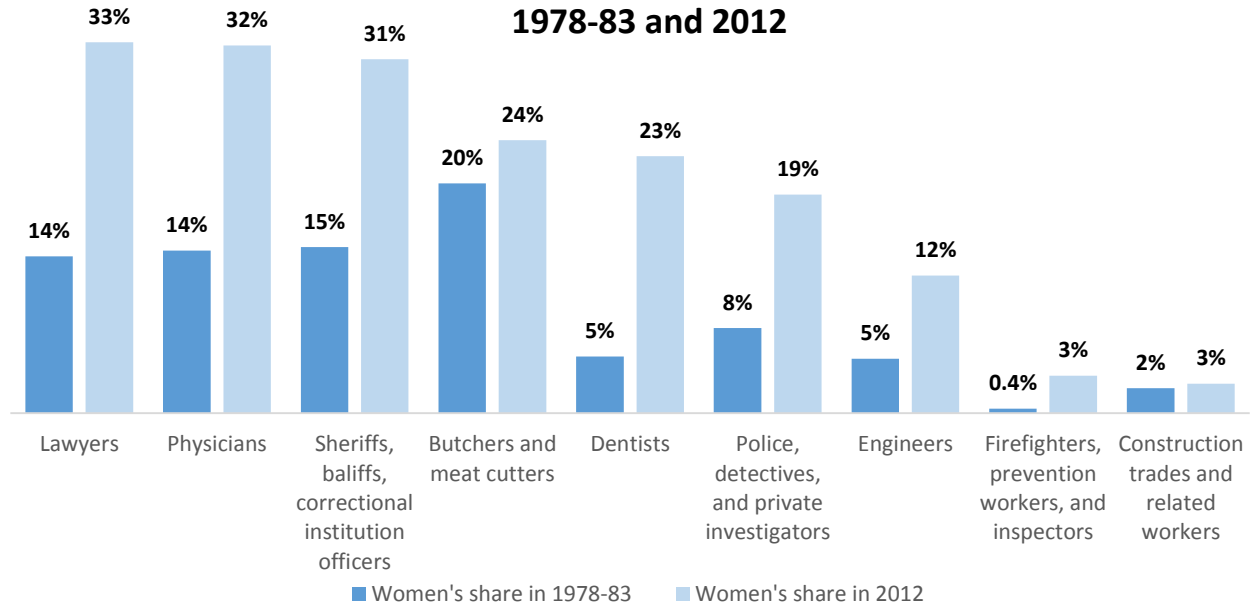
Source: National Women's Law Center, "Women in Construction: Still Breaking Ground," 2014.

>   *b. Apprenticeships*

To meet the demands on the construction industry, the City has coordinated citywide construction training and employment programs. For example, CityBuild Academy is a comprehensive pre-apprenticeship and construction administration training for San Francisco residents administered by the Office of Workforce and Economic Development, in partnership with City College of San Francisco, various community non-profit organizations, labor unions, and industry employers. Trainees learn foundational skills and knowledge to enter the construction trade and succeed as new apprentices. CityBuild aims to strengthen and expand the opportunities by partnering with various union apprenticeship programs, such as the Ironworkers Apprenticeship Training, which includes a Women in Welding Program. However, Proposition 209, discussed earlier, limits the opportunities to have dedicated efforts or set formal requirements in recruiting women.

CityBuild's volunteer Women's Mentorship Program connects women in construction with experienced professionals and student-mentors who offer a variety of valuable resources, including professional guidance, peer support, life-skills coaching, networking opportunities, and access to community resources. Women are encouraged to discover their leadership potential and to create a strong support network.

The City's annual report on Local Hire found that the local hiring policy resulted in a greater number of women residents of San Francisco working on construction projects for the City. Between March 25, 2011 and March 1, 2016, female workers comprised 4.5% of San Francisco residents on covered projects, as compared to 1.8% women of all workers on all active covered projects for the City.

Workers on All Active Covered Projects in San Francisco by Gender, Overall and San Francisco Residents, 2011-2016

	All Workers on Active Covered Projects	San Francisco Resident Workers on Active Covered Projects
Female	344	153
Male	18,468	3,214
Data Not Available	171	31
Total	18,983	3,398
Female Percentage	1.8%	4.5%

Source: Office of Economic and Workforce Development, "2015-2016 San Francisco Local Hiring Policy for Construction Fifth Annual Report to the San Francisco Board of Supervisors," 2015-2016.

In a 2014 NWLC study, the authors noted that, as of 2012, women held only 6.3% of apprenticeships within federally-administered programs and 2.2% of active apprenticeships in the construction industry, a number which has not increased since 2008. Furthermore, women cited problems such as hostile work environments, sexual harassment, and lack of child care for leaving apprenticeship programs at much higher rates than men.

4. Retention
There are a variety of experiences for women in this field. Some interviewees faced no gender-specific discrimination, while others cited challenges, such as a rumored "woman lay-off" (getting laid off from a job because you are a woman), taking longer for a female apprentice to form a relationship with her journeyman mentor than it does a male apprentice leading to a learning disadvantage, and union codebooks with gender exclusionary language (e.g. using the word "tradesmen" instead of "tradespeople").

The IWPR's 2013 investigation determined that most women in construction surveyed felt that they were treated equally as men in regards to safety, but continued to face challenges. While two-thirds felt that they were equally respected on the job and treated equally in hiring, only 40% said that they were equally promoted. However, changes in the culture of the industry are evident as 49% of younger women reported that they are always treated

You get paid the same as a man. You get paid really well. And benefits. I have a daughter at home [to support]—people have different incentives.
—Female Construction Worker

equally when it comes to formal training, compared with 32% of older women. While more than 1 in 10

respondents in the IWPR survey had taken claims to the U.S. Equal Employment Opportunity Commission, only a minority of these women felt that the claims were successfully addressed.

A 1999 study by the U.S. Department of Labor on occupational health and safety of women in construction found that 88% of women construction workers had experienced sexual harassment at work, compared to 25% of women in the general workforce. In the 2013 IWPR study, 31% of women responded that they experience sexual harassment constantly or frequently at work, still higher than the national average from almost 20 years ago. Additionally, 3 out of 10 respondents over the age of 45 noted frequent age-based harassment or discrimination and 32% of respondents of color reported frequent racial harassment or discrimination. Of respondents who identified as LGBT, 37% described frequent discrimination or harassment based on sexual orientation, the largest percentage of any group. From answers to open-ended questions, the researchers of the 2013 IWPR study found that examples of discrimination included "being demoted or not promoted because men didn't want to work for a woman, being assigned the hardest work, being last to get work and first to be laid off, being hit with cranes, and having tires flattened," while sexual harassment "ranged from inappropriate touching and unwanted and derogatory comments to intimidation in isolated areas." While there has been some progress, these challenges, along with others such as lack of child care, often isolate women and push them out of construction and skilled trades.

IV. Recommendations

While there has been notable progress over the last several decades in the recruitment, retention, and advancement of women in information technology, public safety, and skilled crafts, the current data and climate reveal persisting gender disparities and areas for improvement in addressing gender inequity. In terms of recruitment, the following recommendations stress the need for greater education and outreach, transparency of what the jobs entail, and a strong marketing approach to highlight the benefits of these jobs to women. In regards to retaining and advancing talented women, best practices include mentorships, transparent job placements, a place to discuss grievances, and overall training for staff and management alike.

A. General Recommendations

1. Strategic Recruiting
   a. Allocate funding and designate staff dedicated to improve diversity in the workforce.
   b. Amplify visibility of open City positions through social media, job hosting sites, fitness studios and gyms, supermarkets, etc.
   c. Develop marketing materials that feature prominent images of women, appeal to civic duty and desire to promote the greater good through government service, and highlight competitive benefits, work-life balance, and family accommodations.
   d. Host information sessions for diverse candidates featuring speakers with a range of backgrounds. Partner with women's, LGBT, and ethnic community groups to host sessions at neighborhood community centers.
   e. Ensure that all hiring panels include at least one or more women.

2. Support Advancement
   a. Allocate funding and dedicate staff to improving the retention of diverse employees in the workforce.

b. Host information sessions on career advancement, strategies, and opportunities on a regular basis. Be sure to outreach to diverse employees.
c. Set expectations among senior managers that their senior staff should reflect the City's diversity. Succession planning should include discussion of a diverse talent pipeline.
d. Ensure that leadership opportunities such as specialized training or national conferences are offered to women and other groups equitably.
e. Publicly acknowledge women who perform outstanding work.

3. Address Culture
a. Require implicit bias training and incorporate diversity content in ongoing trainings.
b. Encourage networking among women and other underrepresented groups by developing employee affinity groups that meet on a regular basis.
c. Organize social events with strategically assigned co-chairs to encourage teamwork and inclusion among employees.

B. Field Specific Recommendations

1. Information Technology
a. Work with local educators and organizations to promote STEM education among girls at an early age.
b. To develop talent pipelines, finalize the City Tech Bootcamp and continue connecting with regional women's coding networks.
c. Facilitate connections among women in technology roles, particularly in departments without a designated IT team.

2. Public Safety
a. Publicly acknowledge women who perform strongly on academy and promotion exams.
b. When possible, schedule more than one woman on a shift at a time rather than spreading them out to avoid isolation.
c. Expand cross unit training and rotations for female officers so they are exposed to different fields and become more competitive in promotions.
d. Develop child care options for overnight and weekend shifts.

3. Skilled Crafts
a. Monitor the number of female participants in workforce development programs.
b. Foster partnerships with technical colleges to expand recruitment of women into the construction trades.
c. Incorporate construction trades as part of STEM recruitment programs.
d. Change gendered language in union tradesmen code books and feature images of women in the trades in promotional materials.

In conclusion, the Department on the Status of Women lauds the work of those City departments that have achieved significant gains in hiring, retaining, and promoting women. But there is much work yet to do to ensure that the City workforce reflects the demographics of the people it serves. The Department on the Status of Women welcomes the opportunity to partner with City departments in this important effort which has been identified by Mayor Edwin M. Lee as a priority of his administration.

V. **Appendices**

Appendix A: Technology Job Types Gender Percentages by Selected Job Types, n>10, 2015

Job Type	Job Code & Title	F	M	Total	F%	M%
Information Systems	1042 IS Engineer-Journey	5	59	64	8%	92%
	1043 IS Engineer-Senior	15	71	86	17%	83%
	1044 IS Engineer-Principal	5	50	55	9%	91%
	1052 IS Business Analyst	25	29	54	46%	54%
	1053 IS Business Analyst-Senior	38	32	70	54%	46%
	1054 IS Business Analyst-Principal	40	51	91	44%	56%
	1063 IS Programmer Analyst-Senior	6	17	23	26%	74%
	1064 IS Programmer Analyst-Principal	5	12	17	29%	71%
	1070 IS Project Director	10	34	44	23%	77%
Information Systems Total		**149**	**355**	**504**	**30%**	**70%**
Information Technology	1091 IT Operations Support Admin I	4	7	11	36%	64%
	1092 IT Operations Support Admin II	8	25	33	24%	76%
	1093 IT Operations Support Admin III	15	59	74	20%	80%
	1094 IT Operations Support Admin IV	9	40	49	18%	82%
	1095 IT Operations Support Admin V	5	7	12	42%	58%
Information Technology Total		**41**	**138**	**179**	**23%**	**77%**
Technology Total (By Selected Technology Job Types n>10)		**190**	**493**	**683**	**28%**	**72%**

Source: San Francisco Department of Human Resources, *City and County of San Francisco Workforce Demographic Report,* 2015.

Appendix B: Public Safety Gender Percentages by Department, All Job Types, 2005-2015

Year, Department	F	M	Total	F%	M%
2005					
Adult Probation	52	55	107	49%	51%
Emergency Management	50	169	219	23%	77%
Fire	265	1,458	1,723	15%	85%
Juvenile Probation	85	164	249	34%	66%
Police	576	1,961	2,537	23%	77%
Sheriff	221	688	909	24%	76%
2005 Total	**1,249**	**4,495**	**5,744**	**21.7%**	**78.3%**
2008					
Adult Probation	55	47	102	54%	46%
Emergency Management	181	58	239	76%	24%
Fire	278	1,356	1,634	17%	83%
Juvenile Probation	81	161	242	33%	67%
Police	629	2,217	2,846	22%	78%
Sheriff	250	773	1,023	24%	76%
2008 Total	**1,474**	**4,612**	**6,086**	**24.2%**	**75.8%**
2011					
Adult Probation	85	50	135	63%	37.0%
Emergency Management	173	78	251	68.9%	31.1%
Fire	254	1,196	1,450	17.5%	82.5%
Juvenile Probation	82	132	214	38.3%	61.7%
Police	597	1,986	2,583	23.1%	76.9%
Sheriff	223	783	1,006	22.2%	77.8%
2011 Total	**1,414**	**4,225**	**5,639**	**25.1%**	**74.9%**
2015					
Adult Probation	83	52	135	61.5%	39%
Emergency Management	159	78	237	67.1%	33%
Fire	241	1,272	1,513	16%	84%
Juvenile Probation	79	125	204	39%	61%
Police	604	2,023	2,627	23%	77%
Sheriff	205	730	935	22%	78%
2015 Total	**1,371**	**4,280**	**5,651**	**24.3%**	**75.7%**

Source: San Francisco Department of Human Resources, *City and County of San Francisco Workforce Demographic Reports,* 2005-2015.

Appendix C: Public Safety Gender Percentages by Department, Selected Protective Services Job Types, n>10, 2015

Department	Job Code & Title	F	M	Total	F%	M%
Adult Probation	8444 Deputy Probation Officer	40	24	64	63%	38%
	8530 Deputy Probation Officer SFERS	10	10	20	50%	50%
	8434 Sprv Adult Probation Ofc	5	7	12	42%	58%
Adult Probation Total		**55**	**41**	**96**	**57%**	**43%**
Dept of Emergency Management	8238 Public SafetyComm Disp	100	40	140	71%	29%
	8239 Public SafetyComm Supv	17	6	23	74%	26%
Dept of Emergency Management Total		**117**	**46**	**163**	**72%**	**28%**
Fire Department	H002 Firefighter	94	663	757	12%	88%
	H003 EMT/Paramedic/Firefighter	50	269	319	16%	84%
	H004 Insp, Fire Dept	9	18	27	33%	67%
	H010 Incident Support Specialist	3	7	10	30%	70%
	H020 Lieutenant, Fire Suppression	29	159	188	15%	85%
	H030 Captain, Fire Suppression	8	59	67	12%	88%
	H033 Captain, Emergency Med Svcs	4	21	25	16%	84%
	H040 Battalion Chief, Fire Suppress	4	25	29	14%	86%
Fire Department Total		**201**	**1,221**	**1,422**	**14%**	**86%**
Juvenile Probation	8444 Deputy Probation Officer	22	19	41	54%	46%
Juvenile Probation Total		**22**	**19**	**41**	**54%**	**46%**
Police	0382 Inspector 3	9	36	45	20%	80%
	Q002 Police Officer	68	492	560	12%	88%
	Q003 Police Officer 2	47	288	335	14%	86%
	Q004 Police Officer 3	97	574	671	14%	86%
	Q051 Sergeant 2	7	33	40	18%	83%
	Q052 Sergeant 3	77	286	363	21%	79%
	Q062 Lieutenant 3	16	66	82	20%	80%
	Q082 Captain 3	3	19	22	14%	86%
	9209 Community Police Services Aide	90	101	191	47%	53%
Police Total		**414**	**1,895**	**2,309**	**18%**	**82%**
Sheriff	8302 Deputy Sheriff 1	4	12	16	25%	75%
	8304 Deputy Sheriff	81	477	558	15%	85%
	8306 Senior Deputy Sheriff	16	56	72	22%	78%
	8504 Deputy Sheriff (SFERS)	6	29	35	17%	83%
	8308 Sheriff's Sergeant	5	42	47	11%	89%
	8310 Sheriff's Lieutenant	9	22	31	29%	71%
Sheriff Total		**121**	**638**	**759**	**16%**	**84%**
Public Safety Departments Total (By Selected Protective Services Job Types n>10)		**930**	**3,860**	**4,790**	**19%**	**81%**

Source: San Francisco Department of Human Resources, *City and County of San Francisco Workforce Demographic Report,* 2015.

Appendix D: Skilled Crafts Gender Percentages by Union, Selected Job Types, n>10, 2015

Union	Job Code & Title	F	M	Total	F%	M%
Auto Machinist, Lodge 1414	7306 Automotive Body & Fender Wrk	1	35	36	3%	97%
	7309 Car and Auto Painter	1	14	15	7%	93%
	7313 Automotive Machinist	1	58	59	2%	98%
	7332 Maintenance Machinist	1	42	43	2%	98%
	7381 Automotive Mechanic	1	147	148	1%	99%
	7382 Automotive Mechanic Asst Sprv	1	12	13	8%	92%
Auto Machinist, Lodge 1414 Total		**6**	**308**	**314**	**2%**	**98%**
Carpenters, Local 22 Total	7344 Carpenter	**1**	**62**	**63**	**2%**	**98%**
Cement Masons, Local 300 (580) Total	7311 Cement Mason	**2**	**25**	**27**	**7%**	**93%**
Electrical Workers, Local 6	6248 Electrical Inspector	3	12	15	20%	80%
	7238 Electrician Supervisor 1	1	11	12	8%	92%
	7308 Cable Splicer	1	11	12	8%	92%
	7318 Electronic Maintenance Tech	1	130	131	1%	99%
	7329 Electr Maint Tech Asst Sprv	1	14	15	7%	93%
	7338 Electrical Line Worker	1	11	12	8%	92%
	7345 Electrician	4	79	83	5%	95%
	7366 Electronic Control Sys Tech	1	18	19	5%	95%
	7371 Electrical Transit System Mech	1	203	204	0%	100%
	7380 Electrl Trnst Mech, Asst Sprv	1	21	22	5%	95%
	7390 Welder	1	10	11	9%	91%
	7432 Electrical Line Helper	1	18	19	5%	95%
	7510 Lighting Fixture Maint Worker	1	10	11	9%	91%
	9240 Airport Electrician	1	10	11	9%	91%
Electrical Workers, Local 6 Total		**19**	**558**	**577**	**3%**	**97%**
	7215 General Laborer Supervisor 1	4	36	40	10%	90%
	7502 Asphalt Worker	1	13	14	7%	93%
	7514 General Laborer	21	240	261	8%	92%
	7540 Track Maintenance Worker	2	30	32	6%	94%
Laborers Int, Local 261 Total		**28**	**319**	**347**	**8%**	**92%**
Operating Engineers, Local 3 Total	**7328 Operating Engineer, Universal**	**1**	**42**	**43**	**2%**	**98%**
Pile Drivers, Local 34 Total	**9330 Pile Worker**	**1**	**15**	**16**	**6%**	**94%**
Plumbers, Local 38	6242 Plumbing Inspector	1	15	16	6%	94%
	7250 Utility Plumber Supervisor 1	1	30	31	3%	97%
	7316 Water Service Inspector	5	17	22	23%	77%
	7347 Plumber	1	51	52	2%	98%
	7388 Utility Plumber	2	60	62	3%	97%
	7449 Sewer Service Worker	1	21	22	5%	95%
Plumbers, Local 38 Total		**11**	**194**	**205**	**5%**	**95%**
SF City Workers United Total	**7346 Painter**	**2**	**96**	**98**	**2%**	**98%**
Sheet Metal Workers, Local 104 Total	**7376 Sheet Metal Worker**	**1**	**18**	**19**	**5%**	**95%**
	7120 Bldgs & Grounds Maint Supt	2	14	16	13%	88%
	7205 Chief Stationary Engineer	1	14	15	7%	93%
	7252 Chf Stationary Eng, Sew Plant	3	15	18	17%	83%
	7262 Maintenance Planner	6	19	25	24%	76%
	7334 Stationary Engineer	3	165	168	2%	98%
	7335 Senior Stationary Engineer	1	31	32	3%	97%
	7341 Statnry Eng Water Treat Plant	1	28	29	3%	97%
	7343 Sr Statnry Eng, Wtr Treat Plnt	2	17	19	11%	89%
	7372 Stationary Eng, Sewage Plant	9	108	117	8%	92%
	7373 Sr. Stationary Eng, Sew Plant	3	33	36	8%	92%
Stationary Engineers, Local 39 Total		**31**	**444**	**475**	**7%**	**93%**
Skilled Crafts Total		**103**	**2,081**	**2,184**	**5%**	**95%**

Source: San Francisco Department of Human Resources, *City and County of San Francisco Workforce Demographic Report,* 2015.

Appendix E: Number of Individual Interviews

Field	Total	Senior level	Recruitment	Other, mid-level
Technology	10	3	2	5
Public Safety	11	7	1	3
Skilled Crafts	5	0	4	1

Appendix F: Individual Interview Questions

Background

1. Name & Job Title
2. How long in this position?
3. How long at this current placement?
4. How did you get interested in this field?

Recruitment & Retention

1. What was the application process like?
2. What was the environment like when you first started working?
3. Did you see many women around?
4. Can you describe what you saw or felt in the work environment?
5. How is your relationship with your supervisor / next ranking officer? Do you feel comfortable talking to him/her about work related issues or as colleague?
6. Do you feel comfortable taking days off, or if you've had a family, taking paid time off?
7. Does your department promote a family friendly workplace environment/policy/culture?

Culture

1. What are some personal experiences as a woman working in this field?
2. Do you feel like being a female affects your work environment? How?
3. How does your department recruit women?
4. What challenges or trends do you see now and in the near future?