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An Examination of Recruiting and Selection Practices to Promote Diversity for Colorado State Troopers

The Colorado State Patrol (CSP) has recently increased investments to attract, select, and train highly qualified troopers. An important component of these efforts is to increase the demographic composition of CSP to better reflect the communities it serves. Achieving these goals can be challenging because the levels of interest and qualifications required to serve in law enforcement, and specifically as a state trooper, may not be equally distributed across the state. Furthermore, the strategies used to meet these goals must adhere to equal opportunity laws to ensure legal compliance and a fair selection process. Despite these difficulties, CSP's 2019–2023 Strategic Plan emphasizes its continued commitment to these objectives. For example, one component of the four strategic goals reads, "Building upon recent incremental success, continue recruiting and hiring practices that strive to provide a more diverse pool of eligible applicants."[1]

To assist the state of Colorado in addressing these challenges, CSP asked RAND Justice Policy to partner for a Community Oriented Policing Services (COPS) Field-Initiated Law Enforcement Microgrant in the domain of officer recruitment.

KEY FINDINGS

- In 2015, the Colorado State Patrol (CSP) replaced its in-house written examination with a professionally developed aptitude test. In 2017, CSP removed the physical fitness test as a pass-fail outcome.

- Since 2014, there has been an average increase of 10 percentage points in racial/ethnic minority applicants and an increase of 17 percentage points in racial/ethnic minority appointees.

- Since 2014, there has been an average increase of 3 percentage points in female applicants and female appointees.

- Barriers to diversity include the composition of the current workforce, the nature of the job, relocation requirements, and the lengthy hiring process.

- Recommendations include assessing propensity to apply, determining why applicants drop out, adjusting application windows, exploring strategies to shorten background investigations, and providing a realistic job preview.

The objective of this microgrant was to determine whether barriers to diversity exist in the current recruitment and hiring policies of CSP and, if so, to provide recommendations for how these barriers can be mitigated or removed.

This work was delivered in a series of installments that included written documents and oral presentations. This report consolidates those installments. The first section describes the project's context, objectives, and approach and introduces the responsibilities of a CSP trooper and steps in the hiring process. The second section presents a summary of ongoing initiatives to improve recruiting and selection at CSP, trends in the demographic composition of recent CSP hires, and a discussion of potential barriers to hiring qualified troopers while also diversifying the CSP workforce. The third section provides a set of prioritized recommendations for how barriers to diversity can be mitigated or removed.

Scope and Limitations of This Report

A microgrant provides sufficient time and funding to conduct an exploratory analysis. Our findings are, therefore, not meant to be a comprehensive, in-depth evaluation on the effectiveness of personnel practices but rather are meant to uncover potential barriers to effective recruiting and selection for future investigation. Furthermore, we emphasize that our review is limited to recruiting and selection policies and

practices.[2] Other organizational activities that can affect the composition of a workforce were outside the scope of this study (e.g., academy training, job promotions, and performance reviews).

1. Objectives and Project Approach

To best meet CSP's needs, preliminary discussions with CSP leadership led to the following four objectives:

1. Document current policies and procedures relevant to the recruitment and selection of candidates for the CSP trooper career.
2. Establish the key steps and timeline for recruitment and selection activities.
3. Identify potential barriers in current practices and policies to successfully identify, recruit, and select qualified troopers representing a diverse demographic composition.
4. Provide recommendations to address and remove barriers to include possible changes to policy and adopting new practices.

To address these objectives, we conducted several research activities integrating primarily qualitative methods with some limited quantitative analyses of applicant flow through the hiring process. Specifically, the following activities were the foundation for our analysis:

- We reviewed and examined available documentation related to CSP's recruiting and hiring policies and practices. This examination allowed for a basic understanding of CSP's current planning, recruiting, and selection processes and identify whether key documents might be missing.
- We conducted interviews with 20 recruiting and hiring subject-matter experts (SMEs), including recruiters, senior leaders, human resources representatives, training academy leaders and instructors, and individuals involved with public affairs. The goals of these interviews were to
  - construct a timeline of CSP's most recent recruiting and selection process

Abbreviations	
CALEA	Commission on Accreditation for Law Enforcement Agencies
COPS	Community Oriented Policing Services
CSP	Colorado State Patrol
GED	General Educational Development
HR	human resources
JAMRS	Joint Advertising, Market Research and Studies
KSA	knowledge, skills, and abilities
RJP	realistic job preview
SME	subject-matter expert

- describe current policies and practices for recruiting and selection
- identify potential barriers to recruiting and selecting a qualified and diverse set of troopers.

- We reviewed the scientific literature and best practices used by organizations to recruit and select a qualified and diverse workforce. Although we drew from the general literature on personnel selection and diversity, we conducted specific searches for studies related to recruitment and selection in law enforcement and for studies addressing specific themes raised in our SME interviews. Given the exploratory nature of this effort, we targeted qualitative and quantitative reviews (i.e., our search was not exhaustive). We also referenced the professional and scientific guidelines commonly followed by hiring professionals, referred to by their abbreviated form as
  - the Standards[3]
  - the Uniform Guidelines[4]
  - the Principles.[5]

Overview of CSP Trooper Position and Hiring Process

There are many types of state and local law enforcement agencies, such as police departments and sheriffs' offices. Although law enforcement agencies share the common goal of enforcing the rule of law, CSP specializes in protecting Colorado's roadways. That is, CSP was created to "promote safety, protect human life and preserve the highways of this state by the courteous and strict enforcement of the laws and regulations of this state relating to highways and the traffic on such highways."[6] Table 1.1 presents the basic job duties and eligibility requirements.

CSP Recruiting Activities

Several types of activities currently support recruiting efforts. These efforts have various goals; some focus on generating near-term application submissions, while others develop longer-term awareness of CSP as an attractive employer. One major recruiting source is CSP's online presence (e.g., web searches, job postings). The CSP website offers an option for visitors to express interest in joining CSP,[7] which prompts visitors to provide a name and email address. Those providing contact information receive a standardized email with preparatory materials for the written exam and physical fitness and an application to ride along with a trooper.[8]

TABLE 1.1

Job Duties and Eligibility Requirements for the CSP Trooper Position

Primary Job Duties[a]	Eligibility Requirements[b]
• Investigate traffic accidents, auto thefts, livestock thefts, drug trafficking, and citizen complaints. • Determine whether civil or criminal laws have been violated and learn the appropriate enforcement process. • Write reports mandated by patrol policy and state and federal laws that document enforcement and investigative activities. • Develop case files for prosecution. • Testify at hearings and trials. • Respond in emergency situations involving, but not limited to, lives in jeopardy, assisting other agencies, disaster mobilization, and crowd control. A cadet learns to formulate action plans that anticipate continuously changing circumstances and how to resolve emergencies. • Attend training and certification courses in technical law enforcement skills including, but not limited to, firearms, first aid and CPR, driving, use of force, arrest control, and physical agility.	• Must be age 20 years and 6 months to apply and be at least 21 years of age at the start of the next scheduled academy class. • Must have a high school diploma or General Educational Development (GED) certificate at time of application. • Applicants are not required to be U.S. citizens to apply; however, they must have documentation that allows them to live and work in the United States. • Applicants must have a current and valid Colorado driver's license at the start of the academy. • Applicants must be willing to live within 30 minutes from duty station and must be willing to go to any station throughout the state of Colorado at the time of appointment.

[a] Jackie Perez, *Colorado State Patrol Cadet Job Analysis Report*, Colorado State Patrol Human Resources, September 13, 2017.

[b] This is not an exhaustive list of requirements; examples of other requirements include unimpaired or correctable vision to 20/20; ability to hear and understand voice and radio communication, either aided or unaided; and ability to effectively communicate fluently in English orally and in writing.

Another recruiting source is the CSP Recruiting Team, which consists of three recruiters who are uniformed members of the State Patrol.[9] These troopers engage in such efforts as

- attending career fairs
- responding to live chat inquiries from the CSP website
- engaging in social media (Facebook, Twitter, Instagram)
- establishing partnerships with local colleges and universities; military installations; multicultural clubs; and athletic programs, teams, and competitions across the state of Colorado.

As part of accreditation by the Commission on Accreditation for Law Enforcement Agencies (CALEA), CSP produces an annual recruitment report that provides updates on the past year's recruiting efforts and outlines future recruitment goals. The 2017 report, for example, outlines multiple goals directed toward "seeking out and recruiting quality protected-class" applicants.[10]

CSP Selection Process

To be selected for the CSP trooper position, applicants must progress through several phases before receiving a job offer. Figure 1.1 presents the phases in the selection process, and brief descriptions of each stage are provided in Table 1.2.

In addition to a basic process map outlining the selection phases (Figure 1.1), we have illustrated the duration of each stage of the recruiting and hiring process. Figure 1.2 presents a timeline for the first and second classes of 2018 (i.e., 2018-1 and 2018-2).[11] We emphasize that timelines are specific to each class or cohort hired. Efforts are under way to shorten the duration of the background investigation.

2. Findings: Ongoing Initiatives, Demographic Trends, and Possible Barriers

Drawing from our review of CSP documents[12] and interviews with 20 CSP SMEs,[13] this section presents our findings. Specifically, we focus on outlining several initiatives CSP has undertaken to improve the successful recruiting and selection of a qualified and diverse pool of applicants and recent trends in the demographic composition of applicants, candidates, and new hires. We conclude with a discussion of potential barriers to diversity in current recruitment and selection practices.

CSP Initiatives and Recent Changes to Policy

CALEA aims to support and enhance the delivery of public safety for several types of agencies (e.g., law enforcement, campus security).[14] CSP recently attained CALEA accreditation, and its ongoing compliance produces—among other information—annual documentation and analysis of the demographic composition for many relevant populations (e.g., CSP workforce, CSP applicants, Colorado's available workforce). Specifically, the Executive Accreditation Reports and Recruitment Reports have offered a valuable repository of information for this review.

Recruiting

CSP has adopted several practices to streamline the application process, ensure that information about CSP and the selection process is broadly accessible, and facilitate a personal connection with active CSP troopers. Table 2.1 briefly describes each of these initiatives.[15]

FIGURE 1.1
Overview of CSP's Selection Process

Application → Initial Testing → Background Investigation → Polygraph → Appointing Authority Review Board → Oral Board Interview → Final Testing

TABLE 1.2

Description of Stages in CSP's Selection Process

Stage	Description
Application	The state of Colorado posts a job opening on its website, where interested individuals can submit an online employment application. The application window is open for 14 days. A human resources (HR) analyst reviews each application to ensure that the minimum qualifications have been met and, if so, sends an official email invitation to continue the application process.
Initial Testing	Testing occurs approximately one week after the application window closes. Invited applicants (henceforth referred to as candidates) can select from a range of dates and locations. Testing is administered at one of the three Colorado testing facilities:[a] • Golden (Colorado State Patrol Training Academy) • Colorado Springs (North Colorado Springs Army National Guard Readiness Center) • Grand Junction (Army National Guard Readiness Center). Over the course of a full day, each candidate completes two evaluations: a written examination and a physical fitness step. The written evaluation—developed by an external consulting firm—assesses basic educational skills, emotional outlook, interpersonal skills, and practical skills.[b] Candidates are given three hours and 15 minutes to complete the multiple-choice test, which is scored approximately one week after testing. Although those meeting the passing score on the written evaluation will advance, candidates are also required to complete a fitness assessment. The physical fitness step consists of one minute of push-ups and a 20-meter multistage shuttle run. There are no passing standards associated with the physical fitness step.
Background Investigation	The background investigation is an intensive process conducted by CSP and can take up to eight to ten months to complete for all candidates. The investigation involves compiling criminal records, commercial records, financial records, and reference checks, as well as conducting a face-to-face interview with the candidate.
Polygraph	Informed by the background investigation, a certified State Patrol uniformed member or designee (e.g., a qualified vendor) conducts a thorough polygraph. This involves a series of questions and captures physiological data to ensure honesty of responses. These results are sent to the State Patrol uniformed member who initially conducted the background investigation, and this individual creates a final post-polygraph background summary. Regardless of the outcome, candidates do not fail a polygraph. If the polygraph reveals any concerns (e.g., a policy violation), then the issue will be highlighted for future consideration by HR and the appointing authority.
Appointing Authority Review Board	After receiving training and prior to the board convening, members individually review each candidate's entire file (to include written exam scores, fitness step, background investigation, etc.). The file does not include demographic information or photographs; however, the file does include the candidate's name. Members provide independent ratings on a five-point Likert scale (1 = unsatisfactory and 5 = satisfactory; ratings may use whole, half, and quarter points) for five dimensions:[c] • educational background • prior work experience and history • technical skill and experience (both hard and soft skills) • customer and community skills • character, conduct, behavior, moral qualities, and ability. This structured application review generally begins four to six months prior to the board convening. The board convenes for one or two days. If scores differ by more than one point on the Likert scale, then the board will discuss those discrepancies. A score of 3 or greater is considered passing. The number of members selected for the Appointing Authority Review Board depends on the number of candidates under consideration.
Oral Board Interview	The oral board interview is conducted by three individuals—one major and two CSP commissioned officers. The interview is conducted in person or via video chat and is expected to take 15 to 25 minutes. The panel provides independent ratings on a five-point Likert scale (from 1= less desirable/poor to 5 = most desirable/excellent).[d] The panel asks the candidate up to ten questions targeting some of the competencies described in the trooper job analysis.[e] A score of 3 or greater is considered passing. However, because of limited slots, a top-down selection strategy is typically followed (i.e., the candidate with the highest oral board interview score is selected first, the candidate with the second-highest score is selected second, and so forth). At this point, if appropriate, HR will add qualifying veterans' preference points for those who have submitted their military-issued DD214 form. Conditional job offers are extended to qualified candidates for open positions.
Final Testing	The conditional job offer is contingent on passing the medical screening evaluation, drug testing, and a psychological inventory assessment and interview. If the standards associated with each of the final assessments are met, the appointing authority will review the candidate one final time before extending the candidate a final job offer.

[a] Two of the testing locations—Golden, which is in the Denver metropolitan area, and Colorado Springs—are located near two of the most populated cities in Colorado.

[b] CWH Research, Inc., *Next Generation for Entry-Level Law Enforcement Written Examination: Validation Summary*, undated.

[c] Colorado State Patrol, *Appointing Authority Panel Structured Application Review and Evaluation Rater Guide*, internal instructional materials, undated(b).

[d] Colorado State Patrol, *Oral Board Panel Examination Professional Experience and Rating Scale*, internal instructional materials, undated(c).

[e] Perez, 2017.

FIGURE 1.2

Timeline of CSP's Recruiting and Hiring Process for 2018-1 and 2018-2
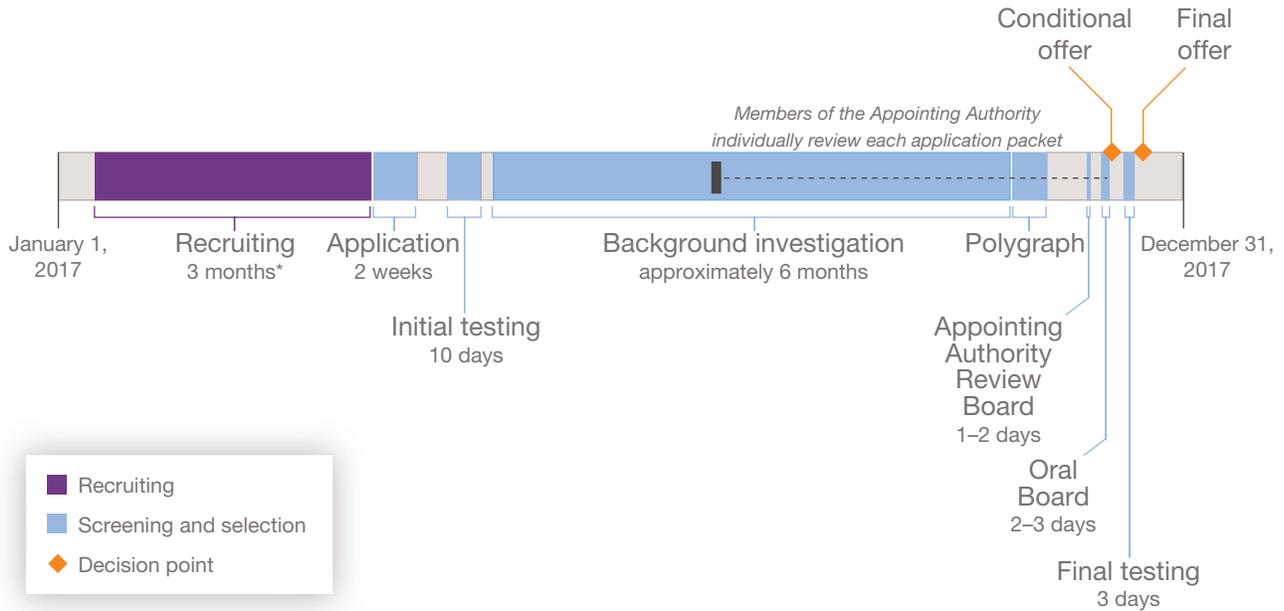
*Although recruiting is continuous, recruiting efforts are prioritized 90 days prior to posting a job opening to increase awareness among potential applicants.

TABLE 2.1

CSP Initiatives to Improve Recruiting Efforts

Initiatives	Description
Online applications	In 2016, CSP transitioned from paper-based applications to an online system. This change resulted in a considerable increase in the number of applications.
Constant Contact emails	In 2016, CSP designed and implemented the distribution of a standardized email to all individuals who express interest in CSP and provide their email address. This email communication offers a structured and systematic way to engage and communicate with potential applicants by providing an application to ride along with a trooper, preparatory materials for the written exam and physical fitness step, and information on how to stay out of trouble with the law so as not to jeopardize eligibility and how any past issues will be considered.
Live chat	In 2016, CSP added real-time communication opportunities with CSP recruiters through the website's chat function. This feature affords potential applicants a heightened level of engagement and quick response times.
Women's Resource Network	The Women's Resource Network was established approximately ten years ago and aims to offer guidance to women already employed by CSP. Although the target audience is current employees, this formal support group can be considered an attractive recruiting feature for women because it suggests that women will have support and mentorship in a male-dominated profession.
Youth Academy	The Youth Academy was initiated approximately 20 years ago and, in its current form, is a weeklong mini training academy. The goal of the Youth Academy is to expose individuals age 16 or older to law enforcement through a series of job-related training exercises (e.g., ethics in law enforcement, crime scene investigation, traffic stops).[a]

[a] Colorado State Patrol, "Youth Academy," 2018b.

Selection

CSP has made two noteworthy modifications to its selection assessments over the past few years. In 2015, CSP replaced its in-house written examination with a professionally developed aptitude test, and in 2017 CSP removed the physical fitness test as a pass-fail outcome.[16] As we will elaborate in the next section, all changes should be evaluated as part of a comprehensive validation study in the context of CSP or a similar population (e.g., troopers from another state agency who share similar job requirements).

Trends in Demographic Composition of Applicants and New Hires

Since class 2014-1, CSP has recorded the number of individuals at various stages of the selection process. These data are broken down by both race/ethnicity and sex (e.g., white female, Hispanic male) and reported for either one training class (e.g., 2015-1) or two training classes together (e.g., 2018-1 and 2018-2).[17] We offer a high-level snapshot of recent recruiting and selection trends over time for race/ethnicity (see Figure 2.1) and sex (Figure 2.2). For both demographic characteristics, those recruited

(applicants) and those selected (appointees) from racial/ethnic minorities and females have increased. When compared with 2014, there has been an average increase of 10 percentage points in racial/ethnic minority applicants and an increase of 17 percentage points in racial/ethnic minority appointees. Additionally, when compared to 2014, there has been an average increase of 3 percentage points in female applicants and female appointees.

Despite trends suggesting improved demographic diversity in CSP, our interviews with SMEs, supplemented by research, suggest that possible barriers remain.

Possible Barriers to Diversity in Current Recruitment and Selection Practices, Based on CSP Interviews

We organized our initial findings from interviews with 20 SMEs into seven broad themes.[18] In Table 2.2, each theme is identified, described, and supplemented with examples of existing research. Some findings may disproportionately affect one or more demographic subgroups, whereas other findings represent broader recruiting and selection challenges

FIGURE 2.1

Recent CSP Recruiting and Selection Trends for Race/Ethnicity
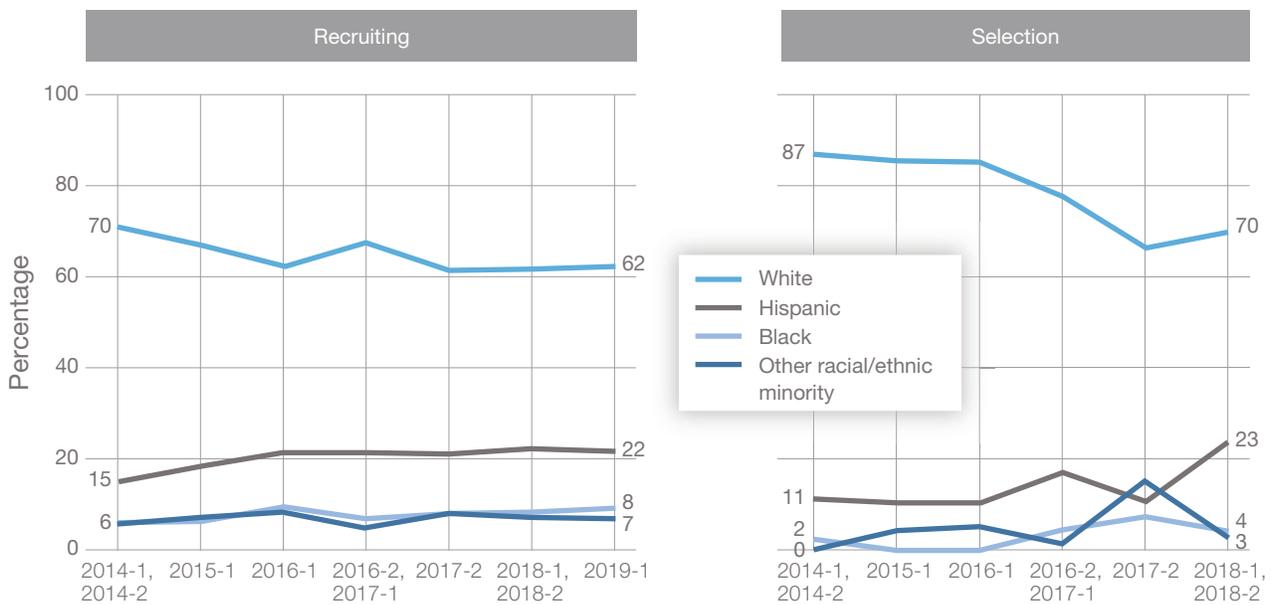
NOTE: Percentages may not total 100 because of rounding error and because data were not presented for those who did not provide their race/ethnicity in the application.

FIGURE 2.2

Recent CSP Recruiting and Selection Trends for Sex

NOTE: Percentages may not total 100 because of rounding error and because data were not presented for those who did not provide their sex in the application. We referenced existing literature to determine which colors should represent females and males. Some work has considered alternatives to the traditional pink and blue. We leveraged this guidance and selected purple to represent females and green to represent males (Lisa Charlotte Rost, "An Alternative to Pink and Blue: Colors for Gender Data," Chartable: A Blog by Datawrapper, July 10, 2018).

TABLE 2.2

Primary Findings from Discussions with SMEs

Issue	Description from CSP Discussions	Discussion of Example Research from Scholarly Literature
Representation	There is a substantial difference between the demographic composition of the available workforce in Colorado and the demographic composition of CSP troopers: • The available workforce in Colorado is approximately 45 percent white males.[a] • As of February 2018, 79 percent of CSP troopers were white males.[b]	Well-established research—commonly referenced as the attraction-selection-attrition model—suggests that current composition may present challenges to recruiting a more diverse workforce, specifically because research shows that (1) individuals are attracted to organizations whose members are similar to themselves in terms of personality, values, interests, and other attributes, and (2) organizations are more likely to select those who possess knowledge, skills, and abilities (KSAs) similar to the ones their existing members possess.[c] These challenges, in addition to segregation between social networks and communities,[d] may require precision recruiting to effectively recruit a highly qualified and diverse pool of applicants.
Propensity to apply	CSP does not currently have a process with which to estimate the eligible and interested workforce. • Current reports provided to CSP focus on the available workforce in Colorado. • However, the demographic composition of the available workforce in Colorado is a poor metric with which to estimate the eligible and interested workforce. For example, using 50 percent (available workforce) as the expected number of female applicants clearly overestimates the proportion of women who are both qualified and interested.	A large quantitative review of 71 studies indicates that an applicant's attraction to organizations and jobs is influenced by perceived fit with the job and such job-organization characteristics as pay, benefits, type of work, organizational image, work environment, and location.[e] Consequently, it is important to establish the type of work that is attractive across different subgroups (e.g., men versus women) prior to finalizing estimates of the eligible and interested workforce.

TABLE 2.2—CONTINUED

Issue	Description from CSP Discussions	Discussion of Example Research from Scholarly Literature
Propensity to apply (continued)	Individuals with the propensity or inclination to serve in law enforcement will likely have a very different demographic composition than the general population. Because the information to compute the expected number of applicants for each demographic subgroup is not available, CSP cannot allocate its resources effectively to address potential barriers to recruiting a highly qualified and diverse set of applicants.	Continuous monitoring of propensity to apply is well established within the U.S. Department of Defense. Specifically, Joint Advertising, Market Research and Studies (JAMRS) conducts mail-based propensity surveys using a stratified random sample of youth ages 16–24.[f] The sample is weighted on several dimensions (gender, age, race/ethnicity, educational attainment, and region) to reflect the general population. Positive propensity is measured by responding "definitely" or "probably" to the question "How likely is it that you will be serving in the Military in the next few years?" (The four response options are "definitely," "probably," "probably not," and "definitely not.") To gain a better understanding of participants' rationale, follow-up questions explore the main reasons to join (if they are interested), as well as reasons not to join. From our review, there has been limited investigation of propensity to apply in law enforcement.
Nature of the job	The CSP trooper position emphasizes patrolling highways and roads, which may not appeal to everyone interested in law enforcement. Specifically, the trooper position may not be attractive for individuals seeking more variety. As an example, SMEs indicated that there are limited opportunities for investigative roles (e.g., detective) that are often associated with other law enforcement agencies.	Seminal research suggests that applicants will evaluate jobs based on their perceived fit.[g] More specifically, the type of work has been shown to strongly correlate with intentions to pursue a particular job.[h] Consequently, the type of work performed by CSP troopers may appeal to different demographic groups.
Work conditions	The nature of the CSP trooper position can require working in isolated locations with limited support from other troopers. That is, troopers may be required to work alone, in isolated rural locations in which backup cannot be provided easily or quickly. SMEs indicated that these working conditions can be a barrier to recruiting women. Working in specific remote parts of Colorado that are predominately white may also present challenges to recruiting racial and ethnic minorities.	Referencing the same large quantitative review of 71 studies discussed above, the work environment has small to moderate correlations with intentions to pursue a job and moderate to large correlations with organizational attraction.[i] Another quantitative review of 242 samples investigated sex differences in job attribute preferences.[j] The largest differences found that women indicated a greater importance for working with people and opportunities to make friends, whereas men indicated a greater importance for solitude. However, we note that these differences were small to medium in size. National statistics from 2017 indicate that nonmetropolitan areas have a lower representation of female law enforcement officers (7.9 percent) compared with metropolitan (14.3 percent) and suburban areas (12 percent),[k] suggesting that the representation of women in rural locations may lag behind more populated areas.
Career progression	Some SMEs indicated that requirements to relocate may present particular challenges to recruiting. Relocation may be required at different career stages. • Prior to the first assignment, individuals might have to relocate twice—once to the academy and a second time to their new reporting station. • Some SMEs indicated that promotions also may require troopers to relocate. Frequent relocations are believed to be especially difficult for single parents who may not have child care because they are separated from potential family support. Some racial or ethnic subgroups may also be disproportionately affected if they have particularly strong family ties and may subsequently be less inclined to relocate.	There is an emerging literature regarding the "family-relatedness" of work decisions[l] and understanding how to better promote "sustainable careers" over the life course.[m] Regarding gender-specific research, one study suggests that women are often less willing to relocate than men. Additionally, women's willingness to relocate can decrease if they have children with strong social ties to the community and if they have a spouse who contributes significantly more to the family income.[n] This is an area that can benefit from future empirical investigation, especially with respect to racial or ethnic differences.

TABLE 2.2—CONTINUED

Issue	Description from CSP Discussions	Discussion of Example Research from Scholarly Literature
Application timeline	The application timeline presents three challenges: • First, CSP invites applications only when hiring for a new class, which may depend on the number of available positions and an approved budget to hire. Therefore, application start dates are inconsistent from year to year. Although mechanisms are available to inform interested applicants of key application dates, those with friends or family at CSP may have access to information (e.g., word of mouth) on application dates before they are posted. These applicants are more likely to be white males, as discussed in the first theme—representation. • Second, all applications must be submitted within two weeks following a position posting. This two-week window may limit opportunities for some potential applicants who may learn of the opportunity late in the application window or may have difficulty meeting the timeline for other reasons. • Finally, the length of the hiring process may be particularly challenging if highly qualified females and racial/ethnic minorities receive competitive job offers from other interested organizations.	The application timeline is one part of a broader component affecting applicants' perceptions of the recruiting process, which includes how applicants are treated during interactions, the perceived fairness and validity of screening assessments, and whether information is provided to applicants in a timely manner. Although considerably fewer studies have been conducted, research suggests a positive relationship between timely responses and job-organizational attractiveness.[o]
Organizational priorities	The responsibilities for recruiting are shared across troopers at CSP. Furthermore, dedicated recruiters have other competing responsibilities that may take priority at certain times. For example, SMEs indicated that recruiters also must help conduct background checks on potential recruits. Although important, these additional responsibilities reduce the time and effort required to develop precision recruiting to attract a highly qualified and diverse pool of applicants.	One of the strongest factors influencing increases in organizational diversity is establishing positions with responsibility for diversity efforts.[p]

[a] David Rollins, *Executive Accreditation Report (ExAR) for Calendar Year: 2017; Subject: Trooper Recruitment Plan Analysis; Prepared for Colonel Matthew C. Packard*, Colorado State Patrol, undated.

[b] Rollins, undated.

[c] Benjamin Schneider, "The People Make the Place," *Personnel Psychology*, Vol. 40, 1987, pp. 437–453.

[d] Aaron Williams and Armand Emamdjomeh, "America Is More Diverse Than Ever—But Still Segregated," *Washington Post*, updated May 10, 2018.

[e] Derek S. Chapman, Krista L. Uggerslev, Sarah A. Carroll, Kelly A. Piasentin, and David A. Jones. "Applicant Attraction to Organizations and Job Choice: A Meta-Analytic Review of the Correlates of Recruiting Outcomes," *Journal of Applied Psychology*, Vol. 90, No. 5, 2005, pp. 928–944.

[f] Joint Advertising, Market Research and Studies (JAMRS), homepage, undated.

[g] Examples include Daniel M. Cable and Timothy A. Judge, "Person–Organization Fit, Job Choice Decisions, and Organizational Entry," *Organizational Behavior and Human Decision Processes*, Vol. 67, No. 3, 1996, pp. 294–311; and Amy L. Kristof, "Person–Organization Fit: An Integrative Review of Its Conceptualization, Measurement, and Implications," *Personnel Psychology*, Vol. 49, 1996, pp. 1–50.

[h] Chapman et al., 2005.

[i] Chapman et al., 2005.

[j] Alison M. Konrad, Edgar Ritchie, Jr., Pamela Lieb, and Elizabeth Corrigall, "Sex Differences and Similarities in Job Attribute Preferences: A Meta-Analysis," *Psychological Bulletin*, Vol. 126, No. 4, 2000, pp. 593–641.

[k] Federal Bureau of Investigation, "2017 Crime in the United States: Full-Time Law Enforcement Employees," undated.

[l] Jeffrey H. Greenhaus and Gary N. Powell, "The Family-Relatedness of Work Decisions: A Framework and Agenda for Theory and Research," *Journal of Vocational Behavior*, Vol. 80, 2012, pp. 245–255.

[m] Jeffrey H. Greenhaus and Ellen Ernst Kossek, "The Contemporary Career: A Work-Home Perspective," *Annual Review of Organizational Psychology and Organizational Behavior*, Vol. 1, 2014, pp. 361–388.

[n] David C. Baldridge, Kimberly A. Eddleston, and John F. Veiga, "Saying No to Being Uprooted: The Impact of Family and Gender on Willingness to Relocate," *Journal of Occupational and Organizational Psychology*, Vol. 79, No. 1, 2006, pp. 131–149.

[o] Chapman et al., 2005.

[p] Alexandra Kalev, Erin Kelly, and Frank Dobbin, "Best Practices or Best Guesses? Assessing the Efficacy of Corporate Affirmative Action and Diversity," *American Sociological Review*, Vol. 71, No. 4, 2006, pp. 589–617.

that would likely affect all applicants. However, it is important to note that although SMEs represent an important perspective, objective data should be examined when possible to determine the accuracy of these perceptions. In some cases, the data needed to evaluate a finding may not be available; therefore, CSP may need to initiate efforts to collect additional data.

A review of these key findings suggests that CSP may have more direct control to address some barriers (e.g., defining the eligible and interested workforce), whereas other barriers may be much more difficult to change (e.g., the nature of the job). Consequently, CSP should focus efforts on understanding controllable factors to reduce any potential barriers for a diverse pool of qualified applicants. A more thorough discussion of potential actions to address these challenges is provided below.

3. Recommendations

This section provides recommendations to address barriers identified in our review by leveraging research and industry best practices. We first list all recommendations, organized by an existing framework used in prior police-recruiting studies, to offer a comprehensive view of recruiting and selection strategies. We then present additional details and supporting research for each recommendation. To conclude, we identify areas that CSP should prioritize, based on our professional assessment of which efforts will maximize short-term impact and minimize financial and personnel resource requirements.

Organizing Framework

The factors associated with the recruitment and selection processes can be complicated and intertwined. Nevertheless, we sought to impose structure by using a framework to guide the discussion. Several frameworks for selection and recruiting themes exist.[19] However, we selected a framework frequently used in prior RAND research (see Figure 3.1) because it is specifically tailored to framing key factors for demographic composition of new hires in public safety positions.[20]
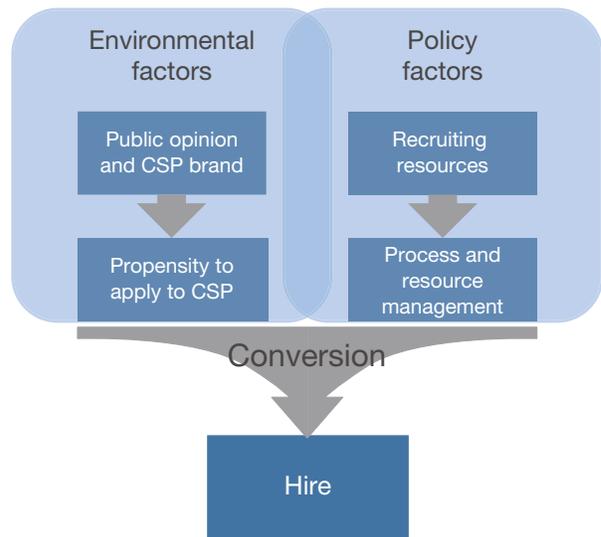
SOURCES: Adapted from Greg Ridgeway, Nelson Lim, Brian Gifford, Christopher Koper, Carl F. Matthies, Sara Hajiamiri, and Alexis K. Huynh, *Strategies for Improving Officer Recruitment in the San Diego Police Department*, Santa Monica, Calif.: RAND Corporation, MG-724-SDPD, 2008; and Nelson Lim, Carl F. Matthies, Greg Ridgeway, and Brian Gifford, *To Protect and to Serve: Enhancing the Efficiency of LAPD Recruiting*, Santa Monica, Calif.: RAND Corporation, MG-881-RMPF, 2009.

At the highest level, policy factors are those that are under the direct control of CSP, whereas environmental factors incorporate factors that are both indirectly influenced by CSP and beyond the control of CSP. The conversion process refers to the collective set of policies, procedures, and requirements an applicant must undergo to become a new hire.

For each key factor (i.e., environmental and policy factors and the conversion process), there are several recommendations. Table 3.1 lists each of these recommendations, which are organized according to our framework.

Environmental Factors

Public Opinion and CSP Brand

Efforts to bolster and reinforce a positive public opinion and the CSP brand represent a long-term, indirect approach to influence the number and demographic composition of future applicants, candidates, and new hires. Nevertheless, it is critical for the enduring health of the organization to commit resources

TABLE 3.1
Overview of Project Recommendations

Framework Factors		Recommendations
Primary	**Secondary**	
Environmental factors	Public opinion and CSP brand	• Reinforce CSP brand by linking to activities with desirable attributes. • Systematically evaluate impact of messaging and community engagement activities. • Evaluate differences between demographic groups in preferences and exposure to advertising.
	Propensity to apply	• Understand individual preferences. • Monitor demographic trends and labor market conditions.
Policy factors	Recruiting resources	• Align key features of the role and CSP with marketing materials. • Engage in precision recruiting of highly qualified women and racial/ethnic minorities. • Continue building resources to provide a realistic job preview. • Consider an employee referral program.
	Process and resource management	• Adjust application windows. • Identify and address recruiting-specific training needs of troopers in the field. • Develop a comprehensive database to track backgrounds and preferences of CSP applicants. • Design a formal evaluation program to evaluate process and resource management.

Conversion		• Assess barriers more systematically.
		  – Why, exactly, are applicants failing?
		  – Why, exactly, are applicants self-selecting out?
		• Continue exploring strategies to shorten background investigation.
		• Leverage organizational commitment to diversity.

and monitor public opinion toward law enforcement and the CSP brand. Positive perceptions of CSP can attract qualified individuals in various ways. For example, individuals may perceive CSP as an attractive profession and apply, or these individuals may recommend others to apply (e.g., influencers in the community, such as coaches, teachers, and other respected members engaging with youth).

Reinforce CSP Brand by Linking to Activities with Desirable Attributes

The marketing literature offers an extensive discussion about brand equity, which typically focuses on marketing a specific product or service.[21] However, these principles can be applied to an organizational image and reputation as well. Broadly speaking, *brand equity* can be thought of as "the marketing effects uniquely attributable to the brand."[22] In other words, what do people think of when they hear "CSP" or "CSP trooper"? The goal is to build favorable, strong, and unique associations with CSP. Unique associations are especially important—and difficult—because other law enforcement agencies (e.g., police departments and sheriffs' offices) may be targeting similar applicants.

CSP has made progress in developing a strong and differentiated image targeting women (e.g., the "I Am a Trooper" video published in January 2016).[23] We encourage CSP to continue these types of campaigns and note that the specific attributes can be enhanced by gaining a more thorough understanding of the propensity to apply.

Systematically Evaluate Impact of Messaging and Community Engagement Activities

An essential component of any marketing initiative is to systematically evaluate whether its messaging and activities are having the intended effects. Evaluation can be conducted in many ways; however, two general types of strategies can be classified as

direct and indirect. Direct methods involve structured feedback (e.g., experiments) involving the deliberate selection of participants, standardized presentation of materials, and careful measurement of relevant information (e.g., what does the message convey? how is the message received?). These results can yield a wealth of information. In addition to the more straightforward question of whether a message has the intended effect, there are opportunities for more nuanced understandings, such as whether different messages should be presented to different audiences.

The second type of strategy utilizes indirect methods to assess the awareness of and associations with CSP. Awareness, in this context, refers to individuals' knowledge of the general work that CSP performs and knowledge that CSP consists of different positions (troopers, port of entry officers, security officers, etc.). One way to explore these questions is through evaluation of social media. For example, CSP hosts several Twitter accounts (e.g., @CSP_recruiter, @CSP_News, @CSP_CSprings, @CSP_CastleRock, @CSP_Golden). Exploratory analysis might involve reviewing the sentiments, themes, and timelines of CSP tweets and evaluating how followers and other social media users respond to different types of tweets.

Evaluate Differences Between Demographic Groups in Preferences and Exposure to Advertising

Information can reach audiences through traditional media channels (e.g., print, radio, television) and social media channels (e.g., social networks, discussion forums, blogging networks, media sharing networks), and different subpopulations will consume information differently. Subpopulations can be defined in many ways, such as by ethnicity, sex, age, and regional differences. Relevant resources, such as the International Association of Chiefs of Police Center for Social Media,[24] are available to offer guidance and lessons learned. CSP is aware of this resource, and we encourage future efforts to continue identifying best practices for using social media in order to recruit a highly qualified and diverse pool of applicants to positions in law enforcement.

Propensity to Apply to CSP

Although CSP has basic demographic information on the citizens in the state of Colorado, this information is insufficient to establish the percentage of the eligible workforce that is generally interested in pursuing a career in law enforcement and the percentage potentially interested in working at CSP. A comprehensive assessment of the propensity to apply would provide the necessary data to establish appropriate expectations on the qualified demographic composition for potential hires; guide the allocation of recruiting resources to areas that are most likely to achieve recruiting objectives; and provide data that can be analyzed to determine whether subgroups have different values, preferences, and propensities to apply. Such analyses would enable the development of tailored marketing materials that can be used to target specific segments of the population.

CSP should combine two broad approaches to improve understanding of factors that may affect potential applicants' propensity to apply. The first approach involves an internal assessment to identify factors that initially attracted current employees to apply to CSP. The second approach, which requires collecting information from the eligible workforce, is much more labor intensive. Next, we discuss each of these approaches in more detail.

Understand Individual Preferences

Identifying the attractive features of CSP can be accomplished by expanding survey efforts at CSP, which annually surveys the CSP workforce.[25] The results of this survey are currently used to monitor the overall health of CSP; we suggest extending its application to inform recruitment approaches. In particular, the survey should include questions to determine what attracted current employees to CSP, features that differentiate CSP from other law enforcement agencies, and reasons why employees continue to stay. In addition to questions focused on positive attributes of CSP, the survey should also address challenges and unfulfilled expectations (e.g., how the reality of the job is different from expectations at the time of application). Understanding the positive and negative attributes can help guide recruiting efforts by providing a realistic job preview (RJP) but is also critical to identifying potential

applicants who may have a propensity to work at CSP. Although drafting custom survey items has some benefits, prior research has established several validated scales that could be adapted for use at CSP.[26] For example, validated scales have been developed to address a wide range of workforce topics, including workplace values,[27] organizational culture,[28] and satisfaction (e.g., pay, coworkers, job).[29] These scales could be combined with other custom items for a survey that can be used to develop profiles that characterize low and high performers and describe characteristics of the job and the working environment. These profiles can then be used to attract other high-potential performers to CSP. In addition to building basic profiles, analyses should also be conducted to determine whether different profiles emerge among relevant demographic subgroups. For example, there may be specific characteristics of the job or working environment that women experience more frequently than men.

In addition to surveying current employees, CSP should consider investing in an annual marketing survey to gather critical data needed to evaluate the eligible workforce's propensity to apply to CSP. Specifically, efforts should be undertaken to better understand the overall attractiveness of CSP and target jobs (e.g., trooper) at CSP. Research suggests that three broad types of items could be used to evaluate job-organization attraction: how attractive a specific job is to the respondent, how attractive the organization is to the respondent, and how attractive the organization is in general (e.g., organizational image).[30] The marketing survey should also gather information on desired job and organizational factors (e.g., pay, location, type of work, organizational reputation, job security), perceived characteristics associated with CSP, and factors perceived to be associated with a specific job (e.g., trooper).

For additional information about the practical application of this recommendation, we suggest reviewing the Department of Defense's efforts to monitor propensity to apply.[31] JAMRS conducts a biannual, mail-based propensity survey using a stratified random sample of youth ages 16–24. The sample is weighted on several dimensions (gender, age, race/ethnicity, educational attainment, and region) to reflect the general population. Positive propensity

is measured by responding "definitely" or "probably" to the question "How likely is it that you will be serving in the Military in the next few years?" (The four response options are "definitely," "probably," "probably not," and "definitely not.") To gain a better understanding of participants' rationales, follow-up questions explore the main reasons to join (if they are interested), as well as reasons not to join. To incentivize potential participants, $2 is included in the mail-based survey. For examples of potential findings and additional questions, see the JAMRS *Spring 2017 Propensity Update*.[32]
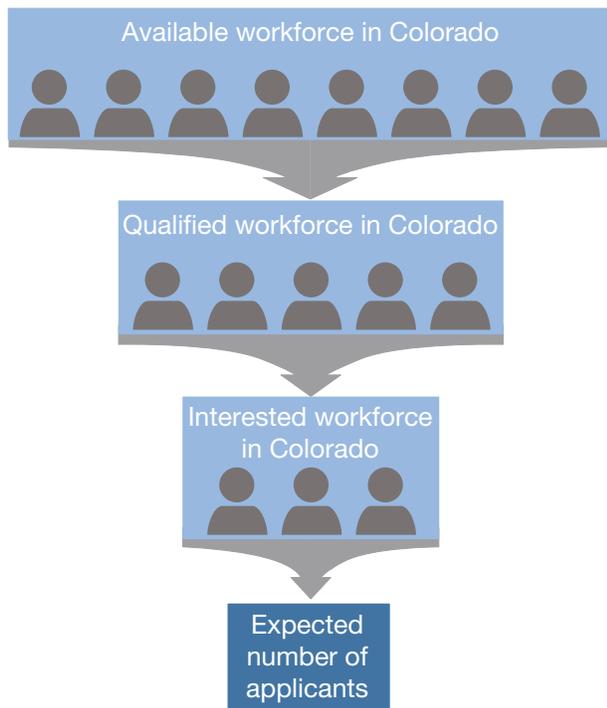
To mitigate some of the costs associated with propensity surveys, CSP could consider partnering with other state agencies in Colorado that might also be interested in gathering information on the eligible workforce. CSP should ensure that any marketing efforts consider a variety of methods to target the relevant population, including the use of web-based, phone-based, and traditional paper-and-pencil surveys.

Monitor Demographic Trends and Labor Market Conditions

Using the information collected from the propensity analysis, CSP should then construct population benchmarks that describe the demographic composition of the qualified and interested workforce.[33] Some data and analyses are already available to define the characteristics of the available workforce (e.g., number and percentage of age-eligible Hispanic males in Colorado). However, these data alone are insufficient to establish appropriate estimates for the expected demographic composition of either the applicant pool or the workforce. CSP should develop and monitor the population benchmarks presented in Figure 3.2 by demographic subgroup to the lowest geographic area possible in Colorado (e.g., zip code).

These population benchmarks can be used to establish reasonable expectations for the number and demographic mix of applicants. Ideally, the expected number of applicants could be computed for targeted locations (e.g., zip codes, counties) to identify underperforming areas that may require further attention and analysis. Similarly, markets that are producing a more qualified and diverse
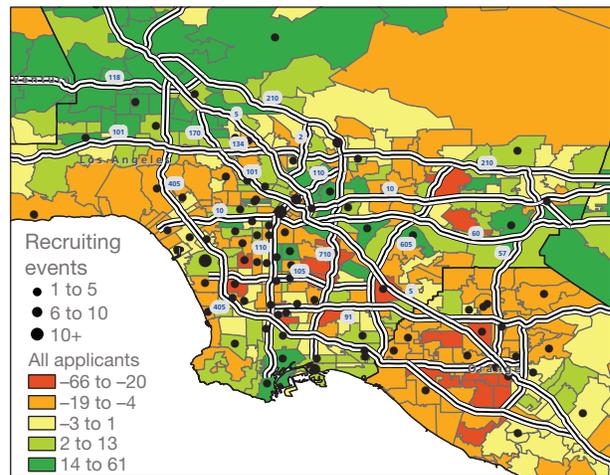
FIGURE 3.2

Defining the Available, Qualified, and Interested CSP Applicant Pool

FIGURE 3.3

Example Geographic Analysis for Expected Number of Applicants

SOURCE: Lim et al., 2009, p. 19.

pool of applicants than expected could reveal important lessons for future recruiting efforts. An example analysis of expected applicants by zip code for recruiting police candidates in the county of Los Angeles is shown in Figure 3.3. The dark green regions show locations that produce more applicants than expected, whereas the red regions show areas that produce fewer applicants than expected (i.e., underperforming).

In addition to establishing population benchmarks, CSP should consider how a population changes over time as people move into or out of a particular region. Different migration patterns could affect the total number and the characteristics of the total qualified applicant pool. Therefore, locations where a highly qualified and diverse set of applicants reside may change over time. Additionally, areas with less migration may require more targeted local recruiting to identify potential applicants with a propensity to work in those regions.

Policy Factors

Recruiting Resources

The knowledge gained from any propensity studies conducted to understand the labor market and the potential applicant pool can be directed to recruiting resources to increase the likelihood that a highly qualified and diverse pool of applicants will apply to CSP. These recruiting resources include tailoring marketing messages through advertisements and outreach activities and incentives (e.g., bonuses) to attract applicants.[34]

Align Key Features of the Role and/or CSP with Marketing Materials

CSP should review marketing materials to ensure that the job and organizational characteristics emphasized are representative of CSP and are important to the targeted applicant pool. For example, prior research for police departments in Southern California indicated that applicants not only wanted to serve their communities but also had a strong desire for stable employment.[35] It is important to note that different marketing materials might need to be tailored to the specific needs and characteristics of one or more subgroups. CSP should also evaluate the effectiveness of these marketing materials to ensure that the target audience notices the job and organizational characteristics that have been emphasized.

Understanding which recruiting sources are most effective is the first step to developing precision recruiting to target a highly qualified and diverse set of applicants. Although broad recruiting efforts will yield increases in the total recruiting pool, tailored messages and outreach are needed to increase the percentage of female and racial/ethnic minority applicants. For example, precise recruiting of female applicants may require tailoring messages to female athletes, racial/ethnic minority valedictorians, veterans, and other law enforcement agencies.[36] Recruiting messages should be clearly communicated both in writing and with visual imagery to convey a commitment to diversity. These communications can be part of a broader effort to establish a media presence.

Another component of precision recruiting is to identify the specific locations to target potential applicants who are highly qualified, diverse, and potentially interested in law enforcement.[37] Direct recruiting at events specifically geared toward minorities or women can be particularly helpful.[38] The National Center for Women and Policing provides examples of places to recruit women.[39]

Past research suggests that the attributes and demographic characteristics of recruiters can affect the success of recruiting efforts. For example, females and racial/ethnic minorities may respond more positively to recruiting and outreach efforts when the recruiters share the same demographic characteristics.[40] Therefore, to increase perceived attractiveness of the job and the organization, CSP should use women and racially/ethnically diverse recruiters to hold recruiting events that target female and racial/ethnic minority applicants (e.g., use a female recruiter at a female athletic event).[41]

Continue Building Resources to Provide a Realistic Job Preview

Although information about CSP positions is available on the internet, interviews with CSP SMEs indicated that applicants and even some recent hires do not have an accurate perception of requirements associated with the job or the working environment. To address these concerns, CSP should consider developing an RJP using videos or pamphlets to convey information (positive and negative) about the job and the working environment.[42] Research has shown consistent but modest relationships between RJPs and applicant expectations, applicant perceptions of organizational honesty, and turnover.[43] Thus, an RJP can be a cost-effective strategy to ensure that expectations are realistic, but it may also reduce the overall attractiveness of the organization and, in turn, the number of applicants. Therefore, an RJP needs to be tailored to ensure that targeted subgroups do not develop disproportionally more negative perceptions of the information presented.

Consider an Employee Referral Program

Employee referral programs can be an effective recruiting method for attracting qualified applicants. Past research suggests that employees hired through a referral source are less likely to leave and will have better job performance.[44] It is believed that these positive outcomes are largely due to applicants having more accurate and complete information about the job and the application process. Despite the potential value in recruiting high-quality applicants, employee referral programs might not yield a significant change in the demographic composition of a workforce if the current composition is not very diverse. That is, current employees tend to recruit others who have similar characteristics, and so an organization that is predominantly white males has a high probability of recruiting other white males.

It is important to note, however, that the research on the effectiveness of employee referrals for women and racial minorities is mixed and not conclusive. For example, one large study of an international products and services company showed that racial minorities were more likely to be recruited through a referral than whites.[45] Considering these findings, CSP should carefully evaluate which sources (e.g., referral, website) are most effective for recruiting a highly qualified and diverse set of applicants.

Process and Resource Management

Managing the recruiting process and available resources expands on the discussion above to include specific consideration of the application window and more broadly address allocation of recruiting resources.

Currently, when a new position at CSP is advertised, an individual must submit an application within 14 days. In addition to the short window to complete an application, the dates for position announcements vary from year to year, depending on the needs and number of openings at CSP. We recommend expanding this window of opportunity through two modifications, each likely affecting a slightly different population.

1. We suggest having interested individuals complete applications on a rolling basis. This may attract individuals who are interested in law enforcement more generally but are not set on a specific agency or location. Even if the applications are not considered on a rolling basis, they should be allowed to be completed and then considered when the official application window is open. Then, prior to the official opening, individuals who have completed applications should be prompted to update their information or withdraw their applications if they are no longer seeking employment.

2. We suggest that CSP establish predictable application windows (e.g., an annual window opening at the beginning of a specific month). This may be important for those who are specifically interested in CSP but might not be able to meet the short application window because of other responsibilities. Additionally, we understand that CSP informs applicants that the hiring timeline could vary considerably, and we encourage CSP to continue this practice.

Identify and Address Recruiting-Specific Training Needs of Troopers in the Field

Given that recruiting is a shared responsibility, CSP could conduct a systematic analysis to identify recruiting-specific training needs. Information could be gathered to determine whether troopers have the relevant knowledge on the recruiting and selection process, know to whom to direct specific questions on the hiring process, know what materials (e.g., brochures) potential applicants find most useful, and know what characteristics or messages should be

conveyed to potential applicants to increase job and organizational attractiveness. Troopers can also provide important insights into what they feel is working well, challenges they have experienced, and resources or information that they need to improve recruiting effectiveness. In sum, ensuring that troopers have the resources they need is critical, particularly when time provided to dedicated recruiting events is difficult to balance with other primary job duties.

Develop Comprehensive Database to Track Backgrounds and Preferences of CSP Applicants

CSP has begun to systematically collect information about how applicants first heard about the job by gender and race/ethnicity. This information is currently open-ended, which makes analysis challenging. However, preliminary analyses suggest that most individuals list the internet as the place where they heard about the position. Over 30 percent of responses contained a term related to the Colorado government website (e.g., "Colorado gov," "Colorado.gov," "state website," "Colorado jobs," "state agency website"). Over 10 percent contained a term related to family and friends (e.g., "brother," "father," "auntie," "relative," "family," "friend").

We encourage CSP to build on these efforts to categorize the referral sources. For example, CSP should provide a limited number of response options (e.g., "CSP website," "State of Colorado website," "job fair"). Applicants can then check the one that best applies. There should be an "other" option as well that allows for open-ended comments if none of the preestablished categories apply. Additional questions with the same response format (mostly predefined options with one open-ended "other" category) might include the following: "What sources did you find most helpful in learning about the job?" "What media do you commonly use?" and "Where are you currently living?" If collected in a more systematic way, this information can be more quickly analyzed to provide meaningful insights (e.g., did the recent ad campaign increase the number of women applicants and, specifically, the number of high-quality women applicants?). As will be discussed later, this information collected early on should be linked to subsequent performance throughout the selection process to allow for easy identification of conversion rates. Any

comprehensive database focused on recruiting should also be considered for integration with other data management systems to facilitate a single source for analysis, tracking, and reporting of personnel-related actions.

Design a Formal Evaluation Program to Evaluate Process and Resource Management

Evaluating the success of any marketing or recruiting effort is a critical step to ensuring that resources are optimally allocated to meet recruiting objectives. Specifically, CSP should develop a system to categorize and track inputs and outputs from all recruiting efforts. Different inputs to track should include financial and manpower resources used to prepare for and attend an event, the type of event (e.g., job fair, college or school event, sporting event), the date and location of the event (e.g., county, geographic region), and characteristics of recruiters attending the event (e.g., years of experience, gender). The outputs could include the following types of information: the estimated number of individuals who attended the event, the number of flyers or pamphlets distributed, the number and demographic composition of individuals expressing interest (e.g., signing up to request further information), the number and demographic composition of event attendees who eventually apply, and the number and demographic composition of event attendees who eventually are hired. These data could also be supplemented with open-ended comments from recruiters to share additional insights on the event or suggestions for future events.

The data collected from this type of tracking system would allow CSP to develop specific metrics to measure return on investment by type of event and geographic region and can guide future efforts to recruit a highly qualified and diverse set of applicants. Other related metrics to develop and monitor would be the cost per applicant and cost per hire.

Although establishing a sufficient database for analysis may take a few years, the results for any future analysis will be particularly important for ensuring that resources are used effectively and determining how to prioritize efforts when resources are more limited or constrained. That is, CSP will be better positioned to make decisions on when, where, and how to recruit, given an established budget and timeline.

Conversion Process

The term *conversion process* refers to the recruiting and screening steps that are followed before someone is hired. The conversion process is heavily influenced by the collective policies, procedures, and requirements (e.g., aptitude test) established by CSP. Understanding how these requirements influence the process is critical to minimizing losses of a highly qualified and diverse pool of applicants.[46] Specifically, steps need to be taken to better understand why applicants withdraw or fail to progress to a subsequent stage of the hiring process. A few possible areas that require additional exploration are presented next.

Assess Barriers More Systematically

Why, Exactly, Are Applicants Failing?

CSP collects information on applicants at various stages of the screening process. Using this information, CSP computes the passing rates by race and gender (e.g., Hispanic females) to evaluate whether adverse impact exists.[47] However, to more fully assess potential barriers to hiring a qualified and diverse set of applicants, additional steps need to be taken. First, CSP should conduct a local validation study to fully establish the relationships between screening assessments, decisions, and the KSAs required to be a CSP trooper.[48] In addition to ensuring that the screening assessments are appropriate for measuring important KSAs, the validation study should also be used to provide evidence on the relevance of cutoff scores and the effectiveness of assessments to predict future performance (e.g., training performance, job performance) and to identify any concerns of fairness or bias for different subgroups.

A comprehensive validation study, combined with data on how well applicants perform at each stage, can provide valuable insights to better understand why subgroups may have different passing rates. For example, analyses could indicate that a particular section of the aptitude test results in lower passing rates for a subgroup. Although lower passing rates for a subgroup does not necessarily indicate that

the test is biased, additional steps should be followed to ensure that each test section is related to the job. If the test section is found to be job-related and no alternative measures with equal or higher validity exist, candidate preparation materials can be revised to address these areas.

A candidate preparation guide is already provided through CSP's website, but it offers a wide range of reading resources that may not always be useful to a particular applicant. Furthermore, a static preparation guide does not allow applicants to practice and receive feedback. If resources allowed, CSP could provide practice questions on the website and offer feedback to candidates based on how they performed. CSP could also conduct test preparation workshops to allow potential applicants to take a practice test, receive feedback, and ask questions about the hiring process. These workshops could be offered at targeted locations and could double as a recruiting event to provide information for other prospective applicants.

Why, Exactly, Are Applicants Self-Selecting Out?

There is a noticeable difference between the number of individuals satisfying the minimum application requirements and those who attend initial testing. For example, the 2018-1 and 2018-2 applicant flow by sex reveals that 177 females were qualified to participate in initial testing; however, only 83 females attended the testing exam.[49] In other words, 94 females (or 53 percent) took the time to apply; however, within about a month of applying, they decided not to take the time to test.[50] Technical challenges are a possible explanation (e.g., the invitation to attend initial testing might have been lost in the junk email folder); however, given the number of individuals failing to attend, there are likely additional explanations. Perhaps there were transportation challenges, child-care conflicts, or limited testing options (dates and locations), or perhaps they were simply no longer interested. Once the specific reasons are understood, then they can be addressed. Therefore, we recommend reaching out to those who signed up for testing but did not show and ask why they did not take the test. Given that some of the highest hurdles for CSP are to identify individuals who are interested and

qualified in serving, this pool of no-shows is a potentially valuable source of untapped potential.

Continue Exploring Strategies to Shorten Background Investigation

CSP has acknowledged problems with the current timeline for background investigations and has initiated efforts to reduce the time required to complete them. Our interviews with CSP also indicated that some background investigations take longer because applicants have not provided the necessary information or do not know how to gather the information requested. To address this concern, CSP could implement a preliminary background assessment as an early indicator of potential issues. The Los Angeles Police Department encourages applicants to complete a preliminary background application to aid in its screening process:

> The Preliminary Background Application is designed to help candidates identify some of the common areas of the background investigation process which may need to be explained, cause a delay, or affect the candidacy of candidates in that phase of the selection process. Please read all information and questions carefully. If upon completing this questionnaire it is determined that your background has issues which may cause a delay or prevent you from competing in the selection process, you will be given more information on how to proceed.[51]

Leverage Organizational Commitment to Diversity

Past research has examined how well different diversity policies affect the demographic compositions of organizations. This research suggests two broad approaches that are likely to increase diversity: providing mentoring and networking opportunities and establishing positions responsible for diversity.[52] CSP has initiated several programs, such as the Women's Resource Network, to provide mentoring and networking. CSP should evaluate the effectiveness of these programs and expand them if they are found to be beneficial to women and minorities. In addition to continuing effective mentoring and networking programs, CSP should consider developing diversity

staff positions or committees that have oversight of diversity efforts. These types of positions and committees would focus the responsibility for recruiting on one or just a few individuals. Currently, recruiting is shared across CSP, and there is no specific position fully responsible for diversity efforts.

Prioritized Recommendations

In the preceding sections, we briefly described 16 recommendations. To provide a focused way forward, Table 3.2 shows our prioritized recommendations based on our professional assessment of which efforts will maximize short-term impact and minimize financial and personnel resource requirements. The recommendations are grouped in three priority levels: urgent, important, and medium.

Conclusion

This report offers several ways to improve recruiting and selection to increase the probability of employing a highly qualified and diverse workforce. Some recent CSP initiatives partially address a few of these recommendations, particularly those related to community engagement and other marketing activities designed to reinforce the CSP brand. However, additional steps need to be taken to identify the demographic composition of potential applicants with a propensity to apply to CSP. This requires implementing a systematic process to identify those who are both eligible and interested in working for CSP. The results will also need updating regularly to correspond with potential changes in the demographic composition and interests of the Colorado workforce.

TABLE 3.2

Prioritized Project Recommendations

Priority	Framework Reference	Recommendations
Urgent	Propensity to apply	• Understand individual preferences. • Monitor demographic trends and labor market conditions.

	Conversion	• Assess barriers more systematically.
		  – Why, exactly, are applicants failing?
		  – Why, exactly, are applicants self-selecting out?
		• Continue exploring strategies to shorten background investigations.
		• Leverage organizational commitment to diversity.

Important	Recruiting resources	• Align key features of the role and CSP with marketing materials. • Engage in precision recruiting of highly qualified women and racial/ethnic minorities. • Continue building resources to provide a realistic job preview. • Consider an employee referral program.
	Process and resource management	• Adjust application windows. • Identify and address recruiting-specific training needs of troopers in the field. • Develop a comprehensive database to track the backgrounds and preferences of CSP applicants.[a] • Design a formal evaluation program to evaluate process and resource management.[a]
Medium	Public opinion and CSP brand	• Reinforce the CSP brand by linking to activities with desirable attributes. • Systematically evaluate the impact of messaging and community engagement activities. • Evaluate differences between demographic groups in preferences and exposure to advertising.

[a] We suggest beginning the development of a comprehensive database and formal evaluation program now; however, we do not prioritize these recommendations as urgent because it will take time to build and populate the database (i.e., it will not achieve short-term impact).

Notes

[1] Colorado State Patrol, *2019–2023 Strategic Plan*, undated(a), p. 14.

[2] We define the process of selection to include screening steps as well as offering employment.

[3] American Educational Research Association, American Psychological Association, and National Council on Measurement in Education, *Standards for Educational and Psychological Testing*, Washington, D.C., 2014.

[4] Equal Employment Opportunity Commission, Civil Service Commission, Department of Labor, and Department of Justice, "Uniform Guidelines on Employee Selection Procedures," *Federal Register*, Vol. 43, 1978, pp. 38290–38315.

[5] Society for Industrial and Organizational Psychology, *Principles for the Validation and Use of Personnel Selection Procedures*, 4th ed., Bowling Green, Ohio, 2003.

[6] CO Rev Stat § 24-33.5-201 (2016).

[7] Colorado State Patrol, "Contact Us: Recruiter," 2019.

[8] A ride-along can be considered one form of a realistic job preview (RJP).

[9] CSP recruiters have additional responsibilities beyond recruiting. For example, the recruiters also conduct background investigations.

[10] Justin Mullins, *2016 Analysis Report; 2017 Recruitment, Affirmative Action and EEO Plan*, Colorado State Patrol, undated.

[11] The label "2018-1" signifies the year and training academy session. For example, 2018-1 indicates that training began in 2018 and that it was the first session of the year (typically starting in January). The second session typically begins in July (e.g., 2018-2). In the recent past, there has been one instance of a third session (2017-3), which consisted of lateral transfers (i.e., individuals in other law enforcement agencies transferring to CSP).

[12] The RAND team gathered and examined available documentation related to CSP's recruiting and hiring policies and practices. In total, the RAND team collected 36 documents. Documents are defined broadly as any recorded information (e.g., written, photographic, video). CSP delivered most of these documents (30); however, the RAND team also included downloads and email messages initiated from interactions with the CSP webpage. We developed an annotated bibliography for internal references purposes that included (1) an identification number that served as a quick-reference indicator; (2) CSP's title of the document; (3) a revised document title that was developed by the authors to provide all relevant information; (4) a citation adhering to the guidelines in the RAND Corporation *Style Manual* (RAND Corporation, *Style Manual*, revised third edition, Santa Monica, Calif., CP-243 [09-12], September 2012); and (5) a short summary of the key points relevant to this project.

[13] CSP SMEs included recruiters, senior leaders, HR representatives, training academy leaders and instructors, and individuals involved with public affairs. Each discussion was scheduled for 45 minutes. Some discussions were conducted individually (e.g., recruiters, senior leaders), whereas others were conducted in a group setting (e.g., HR and public affairs representatives). The semistructured discussion questions were tailored to the participant's area of expertise; however, topics included describing the current policies and practices for recruiting and selection and identifying potential barriers to recruiting and selecting a qualified and diverse set of troopers.

[14] CALEA, "Law Enforcement," 2018.

[15] In addition to these initiatives, CSP also engaged in and contributed to professional activities and meetings. For example, CSP is a member of the Police Executive Research Forum and recently participated in a meeting to discuss how the nature of police work has changed in recent years and how recruiting and retaining the type of officers who can excel in the new environment requires a range of solutions.

[16] Applicants are still asked to complete the physical fitness assessment; however, moving forward in the selection process is not dependent on passing this assessment. CSP explained that this change was inspired by annual trooper requirements: Troopers are required to take an annual physical fitness test, but they are not required to pass. Nevertheless, several CSP SMEs suggested that fitness is important to help prevent cadet injuries during the training academy, which is why the physical fitness assessment is still administered in the screening process. Additionally, it is important to note that the results of the physical fitness assessment are included in the overall candidate application package provided to the Appointing Authority Review Board.

[17] When referring to data, we use the terms *sex*, *male*, and *female* to align with how the data were reported.

[18] Because of the limited scope of our primary data collection, two authors of this report conducted an abbreviated applied thematic analysis. We first ensured that our participant sample included personnel in roles who were involved—both directly and indirectly—in CSP's recruiting and selection practices (as described in note 13). For each discussion, there were two note-takers; one note-taker adopted a transcript approach, and the other note-taker adopted a topic approach. Upon concluding the data collection, two report authors individually reviewed both sets of notes and identified themes. Because of the preliminary nature of this work, we opted to be inclusive: If a comment was mentioned by at least two participants, it was considered a theme. From this preliminary list, these thematic labels (or codes) were further refined to best capture the nature of the barrier based on the participants' comments. These refined codes are presented in Table 2.2.

[19] See, for example, James Breaugh, "Employee Recruitment: Current Knowledge and Important Areas for Future Research," *Human Resource Management Review*, Vol. 18, 2008, pp. 103–118, and Robert E. Ployhart, Neal Schmitt, and Nancy T. Tippins, "Solving the Supreme Problem: 100 Years of Selection and Recruitment at the Journal of Applied Psychology," *Journal of Applied Psychology*, Vol. 102, No. 3, 2017, pp. 291–304.

[20] See, for example, Greg Ridgeway, Nelson Lim, Brian Gifford, Christopher Koper, Carl F. Matthies, Sara Hajiamiri, and Alexis K. Huynh, *Strategies for Improving Officer Recruitment in the San Diego Police Department*, Santa Monica, Calif.: RAND Corporation, MG-724-SDPD, 2008, and Nelson Lim, Carl F. Matthies, Greg Ridgeway, and Brian Gifford, *To Protect and to Serve: Enhancing the Efficiency of LAPD Recruiting*, Santa Monica, Calif.: RAND Corporation, MG-881-RMPF, 2009.

21 See, for example, David A. Aaker, *Managing Brand Equity: Capitalizing on the Value of Brand Name*, New York: The Free Press, 1991; Leonard L. Berry, "Cultivating Service Brand Equity," *Journal of the Academy of Marketing Science*, Vol. 28, No. 1, 2000, pp 128–137; and Kevin Lane Keller, "Conceptualizing, Measuring, and Managing Customer-Based Brand Equity," *Journal of Marketing*, Vol. 57, No. 1, 1993, pp. 1–22.

22 Keller, 1993, p. 1.

23 Colorado State Patrol, "Women in the Patrol," 2018a.

24 International Association of Chiefs of Police (IACP), "IACP Center for Social Media," undated.

25 We did not review the survey but learned of this effort in follow-up discussions with CSP.

26 *Validated scales* are surveys or question sets that have been derived by prior research and can help collect and quantify information based on psychological principles.

27 Philip J. Manhardt, "Job Orientation of Male and Female College Graduates in Business," *Personnel Psychology*, Vol. 25, 1972, pp. 361–368.

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30 Chapman et al., 2005.

31 JAMRS, undated.

32 JAMRS and Office of People Analytics, *Spring 2017 Propensity Update*, January 2018.

33 Carl F. Matthies, Kirsten M. Keller, and Nelson Lim, *Identifying Barriers to Diversity in Law Enforcement Agencies*, Santa Monica, Calif.: RAND Corporation, OP-370, 2012.

34 Lim et al., 2009.

35 Lim et al., 2009; Ridgeway et al., 2008.

36 For example, see Chaitra M. Hardison, Nelson Lim, Kirsten M. Keller, Jefferson P. Marquis, Leslie Adrienne Payne, Robert Bozick, Louis T. Mariano, Jacqueline A. Mauro, Lisa Kraus, Gillian S. Oak, and Lisa Saum-Manning, *Recommendations for Improving the Recruiting and Hiring of Los Angeles Firefighters*, Santa Monica, Calif.: RAND Corporation, RR-687-LAFD, 2015.

37 For example, see Abigail Haddad, Katheryn Giglio, Kirsten M. Keller, and Nelson Lim, *Increasing Organizational Diversity in 21st-Century Policing: Lessons from the U.S. Military*, Santa Monica, Calif.: RAND Corporation, CP-385, 2012.

38 Bruce Taylor, Bruce Kubu, Lorie Fridell, Carter Rees, Tom Jordan, and Jason Cheney, *Cop Crunch: Identifying Strategies for Dealing with the Recruiting and Hiring Crisis in Law Enforcement*, Washington, D.C.: National Institute of Justice, NCJ 213800, 2005.

39 National Center for Women and Policing, *Recruiting and Retaining Women: A Self-Assessment Guide for Law Enforcement*, Washington, D.C., undated.

40 Stephen B. Knouse, "Targeted Recruiting for Diversity: Strategy, Impression Management, Realistic Expectations, and Diversity Climate," *International Journal of Management*, Vol. 26, No. 3, 2009, p. 347.

41 Adopting a longer-term perspective, we emphasize the importance of ensuring that efforts to recruit more women and racial/ethnic minorities do not take away from the career progressions of women and racial/ethnic minority troopers.

42 J. M. Phillips, "Effects of Realistic Job Previews on Multiple Organizational Outcomes: A Meta-Analysis," *Academy of Management Journal*, Vol. 41, 1998, pp. 673–690.

43 David R. Earnest, David G. Allen, and Ronald S. Landis, "Mechanisms Linking Realistic Job Previews with Turnover: A Meta-Analytic Path Analysis," *Personnel Psychology*, Vol. 64, No. 4, 2011, pp. 865–897.

44 James Breaugh, "Employee Recruitment: Current Knowledge and Important Areas for Future Research," *Human Resource Management Review*, Vol. 18, 2008, pp. 103–118; and Michael A. Zottoli and John P. Wanus, "Recruitment Source Research: Current Status and Future Directions," *Human Resource Management Review*, Vol. 10, No. 4, 2000, pp. 353–382.

45 Mary E. Taber and Wallace Hendricks, "The Effect of Workplace Gender and Race Demographic Composition on Hiring Through Employee Referrals," *Human Resource Development Quarterly*, Vol. 14, No. 3, 2003, pp. 303–319.

46 Lim et al., 2009.

47 According to the Uniform Guidelines (Equal Employment Opportunity Commission, 1978), *adverse impact* is a substantially different rate of selection in an employment decision that works to disadvantage the members of a race, sex, or ethnic group. The general rule of thumb to determine a substantially different selection rate is one in which the rate of selection for any race, sex, or ethnic group is less than four-fifths or 80 percent of the selection rate for the group with the highest selection rate.

48 Validation studies should adhere to professional and scientific guidelines as outlined in the Society for Industrial and Organizational Psychology, 2003, and the American Educational Research Association, American Psychological Association, and National Council on Measurement in Education, 2014. Separate validation studies should be conducted for other CSP jobs unless significant overlap has been demonstrated between jobs (e.g., the same KSAs are required).

49 These data are from Rollins, undated, p. 18. We note that these numbers do not align with other aggregate-level data provided for 2018-1 and 2018-2.

50 We note that an important step in analysis is to ensure that these individuals were legitimate applicants.

51 City of Los Angeles Personnel Department, "Law Enforcement Officer PBA [Preliminary Background Application] & JPQ [Job Preview Questionnaire]," undated.

52 Kalev, Kelly, and Dobbin, 2006.

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Acknowledgments

About This Report

The Colorado Department of Public Safety continues to seek ways to improve recruiting and hiring practices across its workforce and specifically for Colorado state troopers. In 2017, the Colorado State Patrol (CSP) asked RAND Justice Policy to partner for a Community Oriented Policing Services Field-Initiated Law Enforcement Microgrant in the domain of officer recruitment. The intent of this project was to explore whether barriers to demographic diversity might exist in the current recruitment and hiring policies for CSP and, if so, to provide recommendations for how these barriers can be mitigated or removed.

This report describes work that should be relevant to policy and research audiences with interests in diversity during the recruitment and selection stages. Questions or comments regarding this report should be directed to Tracy Krueger at (310) 393-0411 x7181 or Tracy_Krueger@rand.org or to Sean Robson at (703) 413-1100 x5528 or Sean_Robson@rand.org.

A Note About Hiring Practices and the Law

Although this report discusses several aspects of employment law, it is not intended to be legal advice or recommended legal strategy. Before proceeding with any changes to its selection process, CSP should consult with its own legal counsel to determine an appropriate course of action.

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