PORTLAND POLICE BUREAU
STRATEGIC SERVICES DIVISION

STOPS DATA COLLECTION

2021 ANNUAL REPORT

JULY 1, 2022

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ITEMS OF NOTE

The following report provides in-depth statistical analysis of the decision points within the traffic & pedestrian stops conducted by the Portland Police Bureau during 2021. This section highlights changes from prior reports and actions the Police Bureau is undertaking to address areas of concern noted within the analysis.

- **Stop rates decreased in 2021:** Portland Police Bureau officers performed 44 percent fewer driver stops and 80 percent fewer pedestrian stops than in the prior year. The overall decrease in stops can be primarily explained due to a reduction of officer availability due to Bureau-wide staffing shortages, including the Chief's decision to re-assign all non-investigative Traffic Personnel to precincts for general patrol duty.

- **Non-moving violations:** On June 22, 2021, the Chief of Police directed sworn personnel to focus on safety violations and traffic enforcement in high crash corridors. Stops for non-moving violations or lower-level infractions were still allowed, however with an emphasis on a safety component or an actionable investigative factor, such as specific suspect information. The new protocol was aimed at prioritizing enforcement of driving behaviors that result in serious or fatal crashes while reducing the racial disparities seen in officer-initiated traffic stops for Non-Moving Violations. Following the direction, Bureau personnel – and especially those from Non-Traffic Divisions – reduced their stop rates for Minor Moving or Non-Moving Violations to record lows; however, nearly 40 percent of all stops were still for a stop in those categories. More than 97 percent of all stops were performed solely for a traffic offense.
  Action Item: The current guidance is non-specific and could be interpreted a multitude of ways by Police personnel. The Bureau should consider publishing a specific list of violations that are no longer eligible for stops by Bureau personnel, barring additional safety or investigative components, to further improve the focus on serious driving behaviors.

- **Consent Searches:** Less than 3 percent of all drivers stopped in 2021 were searched – a decline over the prior year and the lowest search rate on record. Drivers were searched with consent on 47 percent of all searches – also the lowest on record. Black / African American drivers were significantly more likely to be asked to consent to a search than other drivers and were less likely to deny consent than White drivers.
  Action Item: The Portland Police Bureau is finalizing changes to PPB Directive 0650.00 Search, Seizures, and Inventories. These changes include the requirement that officers inform community members of their right to deny a consent search and generate an audio recording of the consent process. Additionally, the Bureau has developed written materials in the five most common languages in Portland that inform community members of their rights as they relate to consent searches. Officers will be required to give these written materials prior to any consent search. The new directive will be effective on August 4, 2022. Additionally, the State of Oregon adopted SB 1510 – with an effective date of January 1, 2023 –which requires officers to inform stopped persons of their right to refuse consent to search and to document in a written, video or audio record that the person gave informed and voluntary consent to search. The changes implemented by the Bureau during the Summer will meet all statutory requirements for this law.

- **Stop Disposition:** The issuance of a warning – especially by Non-Traffic personnel – was the most common stop disposition in 2021. However, Hispanic or Latino drivers were significantly more likely to receive a citation than other drivers, regardless of the stop reason. Action Item: The Portland Police Bureau should develop additional training and guidance to ensure equitable stop outcomes for drivers perceived to be Hispanic or Latino.

INTRODUCTION

The Portland Police Bureau produces an annual report to increase the transparency of the Bureau's use of stops in contacting members of the community. The data, and subsequent reports, highlight the demographics of people stopped by sworn PPB personnel and how those demographics have changed over time. Additionally, the report examines the discretionary decision making practices of police before, during, and after a stop to identify potential disparities across the bureau and within different operational divisions.

It should be noted that the data contained in this report are not necessarily an accurate proxy to aid in the determination of racial profiling. Instead, these data allow for an examination of disparities in stops between different demographic groups from an empirical standpoint. As such they allow for a more informed community-wide discussion about how best to keep the community safe and how to accomplish this in the most equitable manner possible. Through community and police partnerships, we can identify areas of potential concern, find solutions on ways to reduce racial bias and perceptions of racial bias, and develop new strategies for community policing and accountability.

Background

The Portland Police Bureau has been collecting data on traffic and pedestrian stops since 2001 based on recommendations from the Blue Ribbon Panel on Racial Profiling[1]. From the program's outset, officers were required to log their perceptions of driver/pedestrian race, gender, and general age (minor vs. adult); the reason for the stop; whether a search was conducted, the type of search conducted, and results of the search; and the overall outcome of the stop. The Bureau's stops application automatically connects to the Bureau's computer-aided-dispatch (CAD) and electronic citation (eCite) systems to aid in the accountability of Stops report completion. The newest version of the stops data collection system launched on June 27, 2018. An example of the current Stops application system is provided in Appendix B.

[1] https://www.portlandoregon.gov/police/article/32381

POLICE BUREAU DISPARITY BENCHMARKS

Most discussion on the relative merits of different type of benchmarking strategies, including U.S. Census data, focus on their ability to accurately describe the racial and ethnic characteristics of the population in areas where law enforcement personnel operate (for a more detailed discussion of this topic, please refer to Appendix D). There are other reasons stop patterns may differ in the absence of bias, including the operational mission of officers[2]. Where a unit operates, and who they may come in contact with, can be heavily influenced by their operational goals and objectives. To account for this differential, and how it may affect who is exposed to police activity, the Portland Police Bureau utilizes two different research-supported benchmarks for the different personnel divisions that initiate traffic stops.

TRAFFIC DIVISION BENCHMARK

Academic researchers have identified the demographics of drivers involved in injury collisions as a best-practice for benchmarking traffic stops[3]. Collision statistics are a reasonable proxy of road users because it describes the frequency that drivers are operating a vehicle, increasing their risk of being involved in a collision or being stopped by law enforcement personnel. Injury collision statistics also act as a proxy for driving location, as the most dangerous locations are over-represented in the statistics. The data can also describe the type of driving behavior that might warrant the attention of police – especially when at-fault drivers are included[4]. Finally, the data is an unbiased benchmark because police are required to respond to injury collisions, making it independent of any discretionary behavior that could intentionally, or unintentionally, alter the subject demographics.

Traditionally, officers assigned to the Traffic Division acted as the primary traffic enforcement arm of the Portland Police Bureau. In 2021, that changed on February 4, 2021, when the Chief of Police Chuck Lovell re-assigned all non-investigative Traffic Officers – a total of 20 officers – to precinct-based patrol units. Some of these officers continued working on traffic enforcement missions utilizing overtime to address behaviors of road users, including drivers, bicycle riders, and pedestrians, that might lead to a collision. Officers on traffic patrol spend the majority of their time patrolling the City's High Crash Network where more than half of the City's deadly crashes occur[5]. Many miles of the High Crash Network overlap low-income neighborhoods and communities of color[6], increasing the likelihood that members of those

Table 1. 2021 Injury Collision Statistics, by Race of Drivers

	2021	
Race/Ethnicity	**Count**	**Percent**
American Indian/Alaskan	15	1.2%
Asian	91	7.0%
Black/African American	195	15.1%
Hispanic	152	11.8%
Native Hawaiian	3	0.2%
White	837	64.7%
Total	**1,293**	**100.0%**

[2] Withrow, B.L., Dailey, J.D., & Jackson, H. (2009). The utility of an internal benchmark strategy in racial profiling surveillance. *Justice Research and Policy, 19,* 19 – 47.
[3] Alpert, G. P., Smith, M.R., Dunham, R.G. (2004). Toward a better benchmark: Assessing the utility of not-at-fault traffic crash data in racial profiling research. *Justice Research and Policy, 6,* 43 – 69.
[4] Withrow, B.L. & Williams, H. (2015). Proposing a benchmark based on vehicle collision data in racial profiling research. *Criminal Justice Review, 40,* 449 – 469.
[5] https://www.portlandoregon.gov/transportation/54892
[6] Portland Bureau of Transportation. (2016). *Vision Zero action plan.* Retrieved from https://www.portlandoregon.gov/transportation/71730
(footnote continued)

groups could be involved in an injury collision or to be contacted by police. The 2021 Injury Collision Benchmark[7] summarizes the identified race / ethnicity of involved drivers[8] in injury collisions investigated by Portland Police Bureau officers[9]. Based on research-indentified best-practices, the Injury Collision Benchmark is used for all stop analyses involving traffic officers, either working a regular shift or on overtime.

NON-TRAFFIC DIVISIONS BENCHMARK

The mission of officers from other Non-Traffic divisions in the Portland Police Bureau, including patrol officers, Neighborhood Response Teams, and other specialty units, primarily relates to the reduction and prevention of violent crime in the City. The average patrol officer does not initiate traffic stops solely based on risky or dangerous driving behavior; rather, they use discretionary traffic stops to contact potential subjects of interest and investigate crimes in addition to reducing injury collisions. As described above, Non-Traffic officers primarily operate in parts of Portland that generate a high volume of 9-1-1 calls (and other calls for service) and have higher levels of violent crime. Utilizing an injury collision benchmark is not appropriate for Non-Traffic officers as it does not adequately describe their mission and population they are serving.

Discerning a race-based benchmark, predicated on crime involvement, is a tricky proposition. Some jurisdictions and researchers[10] have utilized arrest demographics as an internal benchmark for comparison with stopped subject demographics. However, analyses of this sort often fall short as they fail to discern biased behavior when the agency or jurisdiction as a whole is acting in a biased way in all aspects of police work[11]. National[12] and local[13] statistics highlight long standing disparities in the criminal justice system for people of color, particularly African American individuals. Researchers have utilized reports from community members of individuals involved in suspicious activity to benchmark[14]; however, this can also be a biased measure because it incorporates biased behavior from community in regards to race[15].

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[7] The PPB's records management system, RegJIN, does not include "Middle Eastern" as possible racial / ethnic category so the group cannot be included in any benchmark analyses.
[8] RegJIN does not include an indicator if involved drivers were "at-fault", so all drivers are included in the analysis.
[9] An additional 48 drivers involved in injury collisions were classified as "Unknown" in RegJIN. These were excluded from all benchmark totals.
[10] Gelman, A., Kiss, A., & Fagan, J. (2005). *An analysis of the NYPD's stop-and-frisk policy in the context of claims of racial bias.* (Columbia Public Law Research Paper No. 05-95). New York: Columbia University. Retrieved from https://scholarship.law.columbia.edu/faculty_scholarship/1390
[11] Walker, S. (2001). Searching for the denominator: Problems with police traffic stop data and an early warning system solution. *Justice Research and Policy, 3,* 63 – 95.
[12] Puzzanchera, C. (2018). *Juvenile Arrests, 2016*. (Office of Juvenile Justice and Delinquency Prevention National Report Series Bulletin NCJ 251861). Washington, DC: U.S. Department of Justice.
[13] Ferguson, J. (2016). *Racial and ethnic disparities and the relative rate index (RRI): Summary of data in Multnomah County*. Retrieved from http://media.oregonlive.com/portland_impact/other/RRI%20Report%20Final-1.pdf.
[14] Ridgeway, G. (2007). *Analysis of racial disparities in the New York Police Department's stop, question, and frisk practices*. Technical Report TR-534-NYCPF, RAND Corporation.
[15] Beckett, K. (2012). Race, drugs, and law enforcement: Toward equitable policing. *Criminology & Public Policy, 11,* 641 – 653.
(footnote continued)

Given suspect demographic reporting is unable to escape broader systemic and institutional racism, agencies and researchers have investigated using victims as a proxy to benchmark the population[16]. Victim demographics are a reasonable description of general area characteristics, including the personal characteristics of individuals in the area[17]. Not all crime is reported equally – the National Crime Victimization Survey[18] routinely shows that many crimes go unreported each year, however almost all serious violent crimes are reported to law enforcement. Reported victimization can also vary significantly by race (in combination with other factors)[19], however, the seriousness of the crime is consistently found as the strongest predictor of reporting[20]. The 2021 Crime Victimization Benchmark[21] summarizes the profiles of victims of FBI Indexed Crimes – Homicides, Forcible Sex Offenses, Robberies and Aggravated Assaults that occurred in the City of Portland[22] and is used for all stop analyses involving PPB Non-Traffic officers.

Table 2. 2021 Crime Victimization Benchmark, by Race of Victim

	2021	
Race/Ethnicity	**Count**	**Percent**
American Indian/Alaskan	49	1.0%
Asian	224	4.4%
Black/African American	1,004	19.6%
Hispanic	568	11.1%
Native Hawaiian	31	0.6%
White	3,234	63.3%
Total	**5,110**	**100.0%**

Benchmarking Conclusion

Determining the proper population benchmark is a complicated, but key, step to conduct an analysis of PPB's traffic stops. Using U.S. Census data is generally not advisable due to it being primarily focused on the residential population of an area. Additionally, the data does not account for differential exposure with police while being outdated in a city growing as rapidly as Portland. To account for the differing missions of the PPB, two different benchmarks are utilized: Injury Collision Statistics for Traffic Division officers and Crime Victimization Rates for Non-Traffic officers. Both measures provide a more accurate, less-biased measure of the individuals living, working, commuting, and visiting in areas that officers operate.

[16] Gaines, L.K. (2006). An analysis of traffic stop data in Riverside, California. *Police Quarterly, 9,* 210 – 233.
[17] Tseloni, A. & Pease, K. (2014). Area and individual differences in personal crime victimization incidence: The role of individual, lifestyle/routine activities and contextual predictors. *International Review of Victimology, 21,* 3 – 29.
[18] Morgan, R. E. & Truman, J.L. (2018). *Criminal Victimization, 2017* (NCJ 252472). Washington, DC: Bureau of Justice Statistics. Retrieved from https://www.bjs.gov/index.cfm?ty=pbdetail&iid=6466
[19] Powers, R., Khachatryan, N., & Socia, K. (2018). Reporting victimization to the police: The role of racial dyad and bias motivation. *Policing & Society*, 1 – 17.
[20] Bosick, S.J., Rennison, C.M., Gover, A.R., & Dodge, M.
[21] The PPB's records management system, RegJIN, does not include "Middle Eastern" as possible racial / ethnic category so the group cannot be included in any benchmark analyses.
[22] An additional 139 victims were classified as "Unknown" in RegJIN. These were excluded from all benchmark totals.

BUREAU-WIDE STOPS OF DRIVERS

Officers from the Portland Police Bureau reported performing 14,028 driver stops across the City in 2021 – aa 44 percent decrease over the previous year and the lowest number of completed stops since the Bureau began reporting Stops data since 2012. Both operational groups of the Bureau saw a decrease in the total number of driver stops in 2021, with Non-Traffic officers reporting a modest decrease of nine percent over 2020 totals (10,303 stops in 2021 vs. 11,351 in 2020). The Traffic Division reported a larger decline, making only 37 percent as many stops as the year before (3,725 in 2021 vs. 13,640 in 2020). The dramatic decline in the number of stops executed by officers assigned to the Traffic Division is primarily attributable to staffing shortages across the entire Bureau. On February 4, 2021, the Chief of Police Chuck Lovell re-assigned all non-investigative Traffic Officers – a total of 20 officers – to precinct-based patrol units. Some Traffic Officers continued working on traffic enforcement missions utilizing overtime and grant money[23]; however, the vast majority of their time is spent responding to 9-1-1 emergency calls, non-emergency calls for service, and investigating crimes within their particular precincts.

Figure 1. Bureau personnel performed the fewest number of traffic stops since data recording began in 2012.

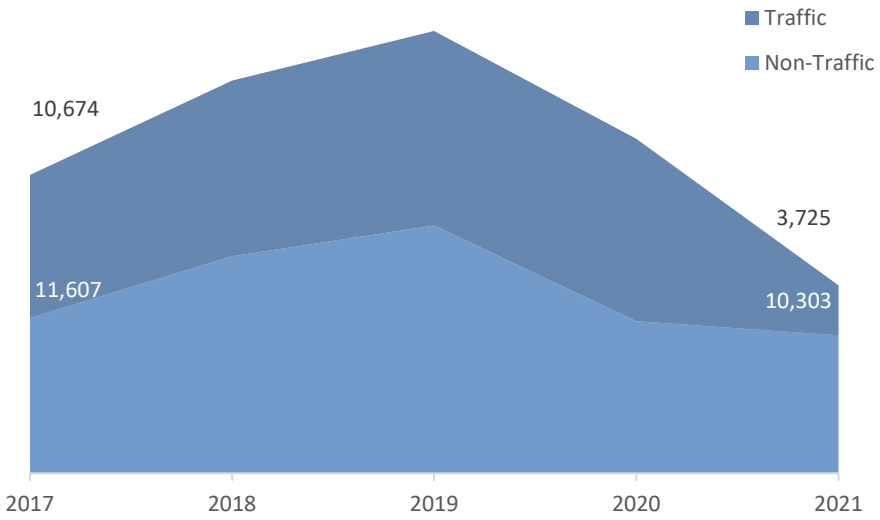
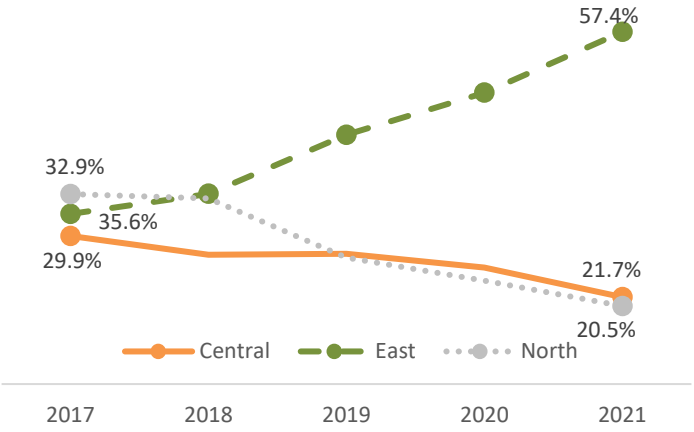


Figure 2. East Precinct has seen the most driver stops over the past five years.



Stop Locations

Portland Police Bureau officers typically focus on a distinct geographic area during the shift (such as Patrol officers work a particular patrol district or Traffic officers monitoring a High Crash Corridor), but may respond to incidents and initiate stops anywhere in the state.

[23] Stops made while conducting overtime enforcement missions are attributed to "Traffic Division stops" throughout this report due to their varying mission from regular patrol activities.
(footnote continued)

Of the stops with a valid location[24], the majority of driver stops in 2021 occurred in East Precinct, followed by North Precinct and Central Precinct. East Precinct has seen significant growth over the past five years[25] (32.9% in 2017 vs. 57.4% in 2021), whereas Central Precinct (29.9% in 2017 vs. 21.7% in 2021) and North Precinct (35.6% in 2017 vs. 20.5% in 2021) have seen significant and consistent decreases over the same time frame[26]. Stop rates for locations outside of Portland have remained statistically similar since 2017[27] (1.6% in 2017 vs. 0.4% in 2021).

Stopped Drivers Demographics

Traffic and Non-Traffic officers execute traffic stops of drivers in support of different missions in an overall effort to improve the safety and livability for residents and visitors in Portland. These diverse missions lead officers to concentrate their efforts in different areas of the City, often encountering diverse communities and people during their missions. The differences in missions and the populations encountered make using a single benchmark to discern any potential bias as a Bureau-wide measure difficult; rather different benchmark analyses are used for the broad operation groups of the Portland Police Bureau (Traffic vs. Non-Traffic).

Table 3. Racial Demographics of Stopped Drivers, since 2017.

		2017		2018		2019		2020		2021	
	Race/Ethnicity	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Traffic	American Indian/Alaskan	10	0.1%	16	0.1%	30	0.2%	33	0.2%	14	0.4%
	Asian	529	4.9%	703	5.3%	813	5.6%	678	5.0%	203	5.4%
	Black/African American	1,174	10.9%	1,392	10.6%	1,630	11.2%	1,720	12.6%	472	12.7%
	Hispanic or Latino	800	7.5%	1,131	8.6%	1,429	9.8%	1,522	11.2%	451	12.1%
	Middle Eastern*	--	--	101	0.8%	182	1.3%	140	1.0%	30	0.8%
	Native Hawaiian*	--	--	48	0.4%	89	0.6%	77	0.6%	13	0.3%
	White	7,710	71.8%	9,405	71.4%	10,359	71.3%	9,470	69.4%	2,542	68.2%
	Unknown/Other^	511	4.8%	385	2.9%	--	--	--	--	--	--
	Traffic Total	**10,734**	**100%**	**13,181**	**100%**	**14,532**	**100%**	**13,640**	**100%**	**3,725**	**100%**

		2017		2018		2019		2020		2021	
	Race/Ethnicity	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Non-Traffic	American Indian/Alaskan	67	0.6%	116	0.7%	125	0.7%	60	0.5%	47	0.5%
	Asian	472	4.1%	752	4.7%	842	4.6%	472	4.2%	402	3.9%
	Black/African American	2,515	21.8%	3,774	23.4%	4,058	21.9%	2,548	22.4%	2,037	19.8%
	Hispanic or Latino	1,045	9.0%	1,602	9.9%	1,855	10.0%	1,130	10.0%	1,150	11.2%
	Middle Eastern*	--	--	123	0.8%	297	1.6%	155	1.4%	149	1.4%
	Native Hawaiian*	--	--	63	0.4%	159	0.9%	104	0.9%	90	0.9%
	White	7,016	60.8%	9,418	58.3%	11,167	60.4%	6,882	60.6%	6,428	62.4%
	Unknown/Other^	432	3.7%	297	1.8%	--	--	--	--	--	--
	Non-Traffic Total	**11,547**	**100%**	**16,145**	**100%**	**18,503**	**100%**	**11,351**	**100%**	**10,303**	**100%**

* Middle Eastern and Native Hawaiian options were added as an available option on June 27, 2018.

^ Unknown / Other options were removed as an available option on June 27, 2018.

[24] About 6 percent of stops since 2017 cannot have their location verified by the system due to non-standard location entries, such as landmarks or highway ramps, or typographical errors. These stops are excluded from location analyses.

[25] $p < .002$, $r^2 = .98$

[26] Central Precinct: $p < .02$, $r^2 = .88$; North Precinct: $p < .006$, $r^2 = .95$

[27] $p < .61$, $r^2 = .12$

(footnote continued)

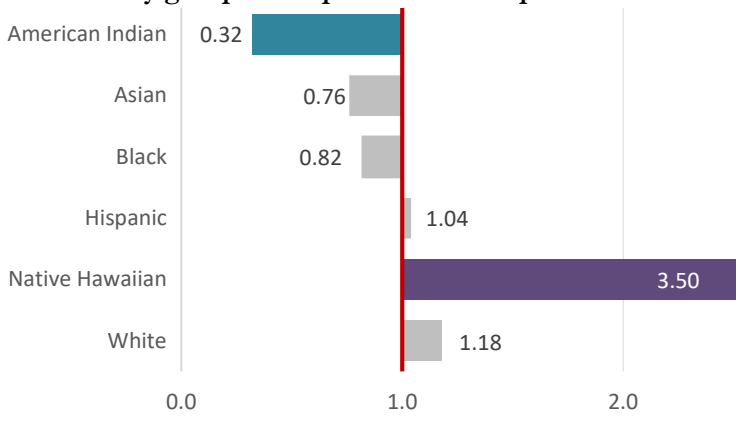
On June 27, 2018, the PPB transitioned to a new data collection application for Stops data to meet new State reporting requirements outlined in ORS 131.935[28]. The State of Oregon Criminal Justice Commission (CJC) mandated several changes to PPB's collection of the perceived race and ethnicity of stopped subjects. Two new race/ethnicity categories were added in June 2018: "Middle Eastern" and "Native Hawaiian or Other Pacific Islander"[29]. The State also mandated that officers assign a named category for each stopped subject, eliminating the use of the "Other" and "Unknown" categories after June 2018. The PPB has not traditionally included this group in quantitative and benchmark comparisons due to low sample sizes and interpretation problems. Additionally, the removal of these groups, along with the addition of two other racial groups, complicate the analysis of long-term trends for all racial groups[30]. Without a systematic way to account for these changes, and acknowledging the utility of long-term trend analysis, the best method is to approach interpretation of results with caution until the new perceived classification system has been active for several years.

TRAFFIC DIVISION

Officers from the Traffic Division are the primary traffic enforcement arm of the Portland Police Bureau. Officers routinely patrol the High Crash Network[31], Portland's most dangerous streets and intersections for road and sidewalk users, to help prevent road injuries and change user behavior. Traffic officers, in conjunction with the Portland Bureau of Transportation, also perform enforcement missions to support the City's Vision Zero Action Plan, whose goal is to eliminate deaths and serious injuries on Portland streets by 2025. Given the intense focus by Traffic officers on driving behavior, the Injury Collision Benchmark (see Table 1) is the best indicator to assess potential biases of officers enforcing traffic laws.

The racial demographics of drivers stopped by PPB Traffic officers has significantly changed over the past five years, with officers stopping significantly more Hispanic (7.5% in 2017 vs. 12.1% in 2021)[32] and Black / African American (10.9% vs. 12.7%)[33] drivers while stopping significantly fewer White drivers (71.8% vs. 68.2%)[34]. This trend mirrors the overall demographic patterns in the area, with communities of

Figure 3. Native Hawaiian or Other Pacific Islander drivers were the only group overrepresented in stops in 2021



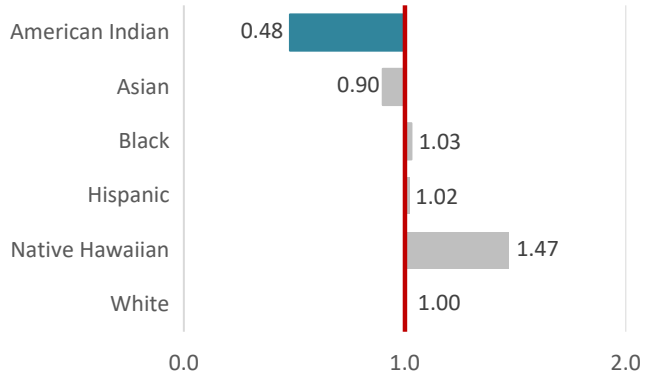
[28] https://www.oregonlegislature.gov/bills_laws/ors/ors131.html
[29] Shortened to "Native Hawaiian" in all tables and charts.
[30] As an example, did a particular perceived racial / ethnic group increase due to a greater number of stops of that population or because people previously categorized as "Unknown" or "Other" were predominantly reclassified as that group?
[31] https://www.portlandoregon.gov/transportation/54892
[32] $p < .001$, $r^2 > .99$
[33] $p < .05$, $r^2 = .79$
[34] $p < .02$, $r^2 = .89$
(footnote continued)

color growing at a faster rate than White residents. In 2021, drivers perceived to be Native Hawaiian or Other Pacific Islander were the only group to be stopped at a disparate rate compared to the 2021 Injury Collision Benchmark[35] whereas drivers perceived to be American Indian or Native Alaskan were stopped less than expected; however, both groups represent less than 1 percent of all performed stops and drivers involved in injury collisions and are susceptible to small-sample size analysis problems. No other groups were over- or under-represented in stops performed by Traffic Officers over the entire year.

NON-TRAFFIC DIVISIONS

Officers from Non-Traffic divisions – namely, Patrol, investigations, and other support divisions – focus on preventing and responding to criminal activity in the city. By focusing on crime interdiction, officers are likely to spend more time in communities with a high preponderance of violent crime. The Crime Victimization Benchmark[36] (see Table 2) is used as a proxy measure for drivers in these areas, regardless if they are residents, commuters, or visitors to the community.

Figure 4. Non-Traffic officers stopped drivers in-line with the Crime Victimization Benchmark in 2021.



Non-Traffic divisions have seen slight changes in demographic stop rates over the past five years. Officers stopped significantly more drivers perceived to be Hispanic / Latino (9.0% in 2017 vs. 11.2% in 2021) [37] while stopping fewer Black / African American drivers (21.8% vs. 19.8%) – albeit at a non-significant rate[38]. White drivers were also stopped more than in prior years (60.8% vs. 62.4%), but the increase was non-significant[39]. In 2021, drivers perceived to be American Indian or Native Alaskan were stopped at a less-than-expected rate compared to the 2021 Crime Victimization Rates; however, the group represents less than 1 percent of all performed stops and crime victimization rates and are susceptible to small-sample size analysis problems. No other groups were over- or under-represented in stops performed by Non-Traffic Officers over the entire year.

Driver Stop Reasons

Differential stop patterns based on the intersection between the driver's perceived race and the severity of the alleged infraction can highlight biased police behavior; specifically, non-White drivers

[35] The Disparity Index compares the proportion of stopped drivers to a benchmark for each racial group. Races with a disparity index greater than 2.0 would indicate a meaningful overrepresentation, while a value below 0.5 would indicate a meaningful underrepresentation of the stopped group.
[36] The benchmark includes all Portland victims of the FBI Indexed Crimes of Homicide, Forcible Sex Offenses, Robbery, and Aggravated Assault.
[37] $p < .04$, $r^2 = .80$
[38] $p < .30$, $r^2 = .35$
[39] $p < .28$, $r^2 = .37$
(footnote continued)

being stopped at a higher rate for more minor infractions can be an indicator of biased policing. A key action of Vision Zero centers on curbing dangerous behaviors that contribute to fatal and serious injury crashes (including speed, impairment, and other dangerous behaviors) through traffic enforcement. Since driving behaviors associated with Major and Minor Moving Violations[40] can contribute to fatal and serious injury crashes, Non-Moving Violations represent a greater portion of an officer's discretionary judgement on whether to initiate a traffic stop[41].

In the 2020 Annual Report, it was identified that the Bureau exhibited differential stop patterns based on the perceived race of the driver being stopped; specifically, Black / African American drivers were significantly more likely to be stopped for Non-Moving Violations by officers across the Bureau. Given these stops are often executed under the guise of "investigatory" or "pretext" practices[42] – they have been routinely defined as a form of systemic or institutional racism[43] due their disparate impact echoed in Stops results across the nation. In response, Chief Lovell announced on June 22, 2021 a change in focus on traffic stops as a way to mitigate the disparities identified in the 2020 Annual Report. Specifically, the Chief announced:

> "I am directing sworn personnel to focus on safety violations and enforcement in high crash corridors (these are determined by PBOT). We need to focus on behaviors that result in serious or fatal crashes, such as speeding, driving while impaired, distracted driving, etc. Stops for non-moving violations or lower level infractions are still allowed, but with an emphasis on safety component or have an actionable investigative factor to it, such as specific suspect information."

Previously, the Bureau divided all statutes into four distinct categories for classification and analysis: Major Moving Violations, Minor Moving Violations, Non-Moving Violations, and Non-Traffic Offenses. The Chief's direction necessitated a modification to these categories as some behaviors specifically identified as dangerous, namely speeding, were classified as a Minor Moving Violation due to their statutory definition and punishment level[44]. For the 2021 Annual Report, the four major classifications for Stop Reason analyses are as follows:

> **Dangerous Driving Behaviors** – All traffic violations that are identified as a "Class A" or "Class B" by State statutes. Traffic-related criminal offenses (such as reckless driving or driving under the influence of intoxicants) are also included when the offense is defined as a misdemeanor or felony in the Oregon Revised Statutes. All speeding, DUII, and distracted driving offenses are also included in this classification.
>
> **Minor Moving Violations** – All traffic violations that occurred while the driver is moving and are identified as a "Class C", "Class D", or "Specific Fine" are included in this group. Additionally, almost all driving violations issued under Portland City Code or Tri-Met Code are also included in

[40] Minor Moving Violations involve all Class C or D violations. Major Moving Violations include all traffic-related crimes (felony or misdemeanor) and Class A or B violations. Most moving violations are outlined in ORS 811.005 – 811.812.

[41] Since June 27, 2018, officers are required to cite the exact statutory reason for the stop, by ORS, Portland City Code, Federal Statue, or other ordinance.

[42] Epp, C.R., Maynard-Moody, S., & Haider-Markel, D.P. (2014). *Pulled over: How police stops define race and citizenship*. University of Chicago Press.

[43] Baumgartner, F.R., Epp, D.A., & Shoub, K. (2018). *Suspect citizens: What 20 million traffic stops tells us about policing and race.* Cambridge University Press.

[44] ORS 811.109 (1)(a) defines driving 0 to 10 miles per hour in excess of the speed limit as a Class D Violation, whereas ORS 811.109 (1)(b) defines driving 11 to 20 miles per hour in excess as a Class C offense.

this group. Improper turns, failing to signal while changing lanes, and failure to use a seat belt are some of the common offenses in this category.

Non-Moving Violations – All traffic-related violations that can occur regardless if the vehicle was being operated or not. The most common offenses in this group are related to the improper display of license plates, expired license plates, and improper equipment (such as headlights or turn signals).

Non-Traffic Offenses – All crimes and violations that are not related to driving on roadways. This would include almost all elements of the criminal code, including robbery, burglary, larceny, etc.

Additionally, the Bureau added additional questions to the STOPS application on December 21, 2020 to allow officers to provide more than one reason for stop, specifically if the officer had either a) probable cause or b) reasonable suspicion – prior to the stop – that the subject was involved in a crime independent of the stop. These additional questions provide additional clarity on why the officer may choose to stop an individual, especially in cases where they are investigating or interdicting criminal activity. All officers received training on how to properly utilize these fields prior to launch.

Table 4. Nearly all drivers stopped in 2021 were solely for traffic offenses.

		Traffic Reason Only		Traffic and Other Crime		Non-Traffic Offense Only	
	Race/Ethnicity	Count	Percent	Count	Percent	Count	Percent
Traffic	American Indian/Alaskan	14	100.0%	0	0.0%	0	0.0%
	Asian	202	99.5%	1	0.5%	0	0.0%
	Black/African American	472	100.0%	0	0.0%	0	0.0%
	Hispanic or Latino	450	99.8%	0	0.0%	1	0.2%
	Middle Eastern	30	100.0%	0	0.0%	0	0.0%
	Native Hawaiian	13	100.0%	0	0.0%	0	0.0%
	White	2,538	99.8%	1	0.0%	3	0.1%
	Total	**3,719**	**99.8%**	**2**	**0.1%**	**4**	**0.1%**
Non-Traffic	American Indian/Alaskan	46	97.9%	1	2.1%	0	0.0%
	Asian	400	99.5%	2	0.5%	0	0.0%
	Black/African American	1,993	97.8%	21	1.0%	23	1.1%
	Hispanic or Latino	1,116	97.0%	13	1.1%	21	1.8%
	Middle Eastern	149	100.0%	0	0.0%	0	0.0%
	Native Hawaiian	88	97.8%	1	1.1%	1	1.1%
	White	6,259	97.4%	57	0.9%	112	1.7%
	Total	**10,051**	**97.6%**	**95**	**0.9%**	**157**	**1.5%**

Nearly all drivers stopped by Bureau personnel – regardless of division – in 2021 were solely for a traffic offense. Officers reported having probable cause or reasonable suspicion of another crime on only two percent of driver stops. Non-Traffic Officers were significantly more likely to report stopping an individual for some other reason than a traffic offense[45], whereas Traffic Officers almost exclusively only stopped drivers for traffic offenses. Non-Traffic personnel did not display any differential stop patterns based on the perceived race of the driver[46], with all groups stopped only for traffic reasons at least 97 percent of the time.

[45] $x^2 = 79.106, p < .001, df = 2$

[46] $x^2 = 4.788, p < .32, df = 4$

The overwhelming majority of 2021 driver stops (72.2%) initiated by Portland Police Bureau officers were for Moving Violations on Portland roadways. However, the stated reason for the stop varies significantly[47] between the two operational divisions of PPB. Traffic Officers were significantly more likely to stop a driver for Dangerous Driving Behaviors and Minor Moving Violations than Non-Traffic Officers. The Non-Traffic Officers were significantly more likely to stop a driver for Non-Moving Violations and Non-Traffic Offenses than the Traffic Officers. The top stop reason for Non-Traffic Officers in 2021 continued to be violations related to missing or expired licenses plates (27.0%), with an additional 9 percent of violations related to missing or malfunctioning equipment. In contrast, the top five stop reasons for Traffic Officers were all moving violations, with speeding (39.4%) or distracted driving (26.5%) violations leading the way.

Table 5. Non-Traffic Officers were significantly more likely to stop a driver for a Non-Moving Violation or Non-Traffic Offense in 2021.

		Moving Violations				Non-Moving Violations		Non-Traffic Offenses	
		Dangerous		Minor					
	Race/Ethnicity	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Traffic	American Indian/Alaskan	9	64.3%	5	35.7%	0	0.0%	0	0.0%
	Asian	151	74.4%	48	23.6%	4	2.0%	0	0.0%
	Black/African American	355	75.2%	94	19.9%	23	4.9%	0	0.0%
	Hispanic or Latino	359	79.6%	81	18.0%	10	2.2%	1	0.2%
	Middle Eastern	30	100.0%	0	0.0%	0	0.0%	0	0.0%
	Native Hawaiian	12	92.3%	1	7.7%	0	0.0%	0	0.0%
	White	1,897	74.6%	566	22.3%	72	2.8%	7	0.3%
	Total	**2,813**	**75.5%**	**795**	**21.3%**	**109**	**2.9%**	**8**	**0.2%**

		Moving Violations				Non-Moving Violations		Non-Traffic Offenses	
		Dangerous		Minor					
	Race/Ethnicity	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Non-Traffic	American Indian/Alaskan	25	53.2%	8	17.0%	14	29.8%	0	0.0%
	Asian	256	63.7%	45	11.2%	101	25.1%	0	0.0%
	Black/African American	1,021	50.1%	231	11.3%	761	37.4%	24	1.2%
	Hispanic or Latino	633	55.0%	135	11.7%	361	31.4%	21	1.8%
	Middle Eastern	111	74.5%	11	7.4%	27	18.1%	0	0.0%
	Native Hawaiian	44	48.9%	15	16.7%	30	33.3%	1	1.1%
	White	3,281	51.0%	711	11.1%	2,316	36.0%	120	1.9%
	Total	**5,371**	**52.1%**	**1,156**	**11.2%**	**3,610**	**35.0%**	**166**	**1.6%**

Table 6. Specific reasons for stop substantially varied between the two operational divisions.

Traffic		
	Count	Percent
Speeding	1,465	39.4%
Distrracted Driving	985	26.5%
Safety Belt Violations	609	16.4%
Failure to Obey Traffic Control Devices	214	5.8%
Turning Violations	188	5.1%

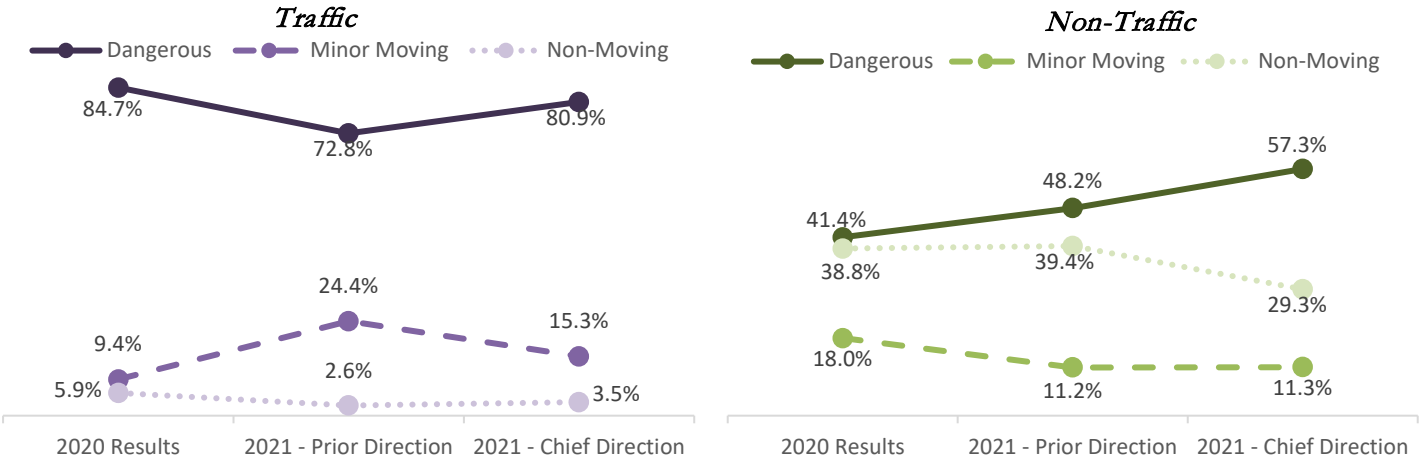
Non-Traffic		
	Count	Percent
Missing or Expired License Plates	2,778	27.0%
Speeding	2,218	21.5%
Failure to Obey Traffic Control Devices	1,516	14.7%
Equipment Violations	906	8.8%
Turning Violations	733	7.1%

Non-Traffic Officers displayed differential behavior based on the perceived race of the driver[48]; however, they do not appear to be a disparate manner. No perceived racial / ethnic groups were stopped at a significantly higher rate for Non-Moving Violations or Non-Traffic Offenses when compared to White subjects; in fact, White subjects were stopped at a higher rate than three other groups of drivers. Additionally, Traffic Officers did not display any significant differences in stop reasons based on perceived race of the driver across all stop severities[49]. These numbers are an improvement over the 2020 Annual Report where Black / African American drivers were stopped at a significantly higher rate for Non-Moving Violations across the entire Bureau.

[47] $x^2 = 1567.453, p < .001, df = 3$
[48] $x^2 = 67.980, p < .001, df = 12$
[49] $x^2 = 11.879, p < .07, df = 6$

Over the past 3 and a half years[50], Portland Police Officers have seen only small – and non-significant changes – in their recorded reason for stopping a driver. Non-Traffic Officers have gradually increased their stop rates for Dangerous Driving Behaviors (43.8% in 2018 vs. 52.1% in 2021) while gradually decreasing their stop rates for Minor Moving Violations (21.1% in 2018 vs. 11.2% in 2021). The stop rates for Non-Moving Violations also dropped for the first time after rising over several years (33.0% in 2018 vs. 38.8% in 2020 vs. 35.0% in 2021). Non-Traffic Offenses have slightly decreased over the same time frame (2.1% in 2018 vs. 1.6% in 2021).

Figure 5. Stops for Dangerous Driving Behaviors generally increased after the Chief's renewed direction



The stop rates for Minor Moving Violations and Non-Moving Violations among Non-Traffic Officers are below their 2020 rates and smaller than any year since the new data collection system launched in the Summer of 2018. These decreases are in line with the Chief's direction of prioritizing traffic enforcement on Dangerous Driving Behaviors. However, about 40 percent of all stops are still initiated for either a Minor Moving or Non-Moving Violation and only three percent of those were paired with the probable cause / reasonable suspicion of another crime. It is not possible to determine if there were any additional safety components or actionable investigative factors that led to these stops without an associated police report. The decline in Minor Moving Violations and Non-Moving Violations seen in the five months following the Chief's direction are encouraging, but the relatively high stop rates for these minor offenses – coupled with the lack of supporting data on additional safety components or actionable investigative factors – should temper any excitement for the short term.

Traffic Officers have experienced a similar trend over several years, gradually increasing enforcement of Dangerous Driving Behaviors and decreasing enforcement of Minor Moving and Non-Moving Violations. However, their 2021 results highlight the changing nature of their mission – and enforcement patterns – due to structural changes in 2021 as a result of Bureau-wide staffing challenges. Over the last year, about 21 percent of all Traffic Officer stops were due to a Minor Moving Violation – a record high over the Division's history. This increase is almost entirely due to the enforcement of seat belt violations – a Class D Violation under Oregon law[51]. Since the

[50] The collection of stop violation by specific statute began on June 27, 2018.
[51] ORS 811.210

transferring of all Traffic patrol personnel out of the division, Traffic Division leadership primarily operate overtime-only traffic safety missions across the city. Many of these missions are grant-supported that reimburse the Portland Police Bureau and City of Portland for any overtime-related expenditures related to the grant's mission. In 2021, the Traffic Division received an overtime-reimbursement grant from the Oregon Department of Transportation specifically to enforce laws related to wearing seat belts. Given the limited availability of personnel and resources for Traffic enforcement, the Traffic Division utilized much of their free time in grant-focused work on safety belt enforcement.

The slight declines witnessed in Minor Moving Violation and Non-Moving Violation stops – especially by those officers assigned to Non-Traffic Divisions – is an encouraging step and demonstrates the Bureau's willingness to act and change according to disparities highlighted through statistical analysis of STOPs data. However, the still relatively high rate of these stops (35% of all stops Bureau wide and 40% of Non-Traffic Officer stops) indicates additional room for growth and change. Additional guidance to officers as to what constitutes a stoppable "safety component" might be beneficial as it could be argued that every State statute and City code related to traffic enforcement is related to road safety. For instance, is operating a motor vehicle without headlights[52] a safety concern? Is executing a U-turn within 500 feet of an oncoming driver[53] a safety concern? Both of these offenses are Class C Violations and are considered to be minor offenses. Without specific guidance, different officers are likely making different decisions based on their own personal judgement as to what constitutes an articulable "safety concern".

The current STOPs data collection only requires personnel to document if "probable cause" or "reasonable suspicion" is present for another crime. There are other instances when "actionable" information may not rise to this threshold but are still relevant per the Chief's guidance. Without an accompanying police report or additional data collection, it is not possible to determine the number of stops for Minor Moving Violation and Non-Moving Violation that are connected to an active criminal investigation. Additional data collection requirements could provide insight into these stops, if the rate does not continue to decline.

Search Rates

A common measure for examining bias policing is to examine racial disparities in searches. Police can exercise their discretion in one of two ways during a search—low discretion or high discretion search. In low discretion searches, policy or training dictates the likelihood of a search occurring. For example, if police stop an individual and take custody of them to administer a breathalyzer test, policy would require that the subject be searched for weapons prior to being transported. In high discretion searches, such as consent searches, police officers exercise more judgment in their decision to search. Racial profiling experts maintain that if police overuse high discretion searches on people of color, especially when combined with a lower rate of recovering contraband, it could suggest that police are engaged in biased policing[54].

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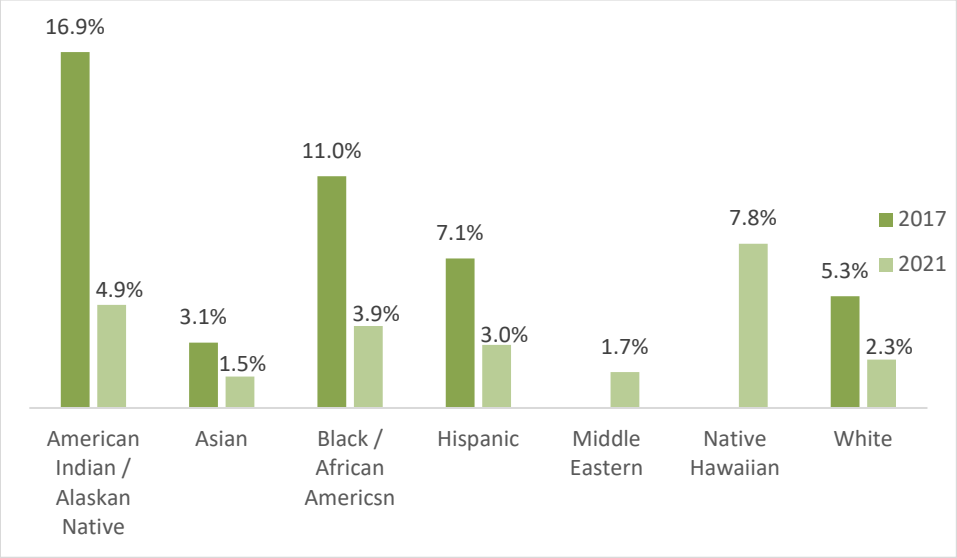
[52] ORS 816.330

[53] ORS 811.365 (1)(c)(A)

[54] Knowles, J., Persico, N., & Todd, P. (2001). Racial bias in motor vehicle searches: Theory and evidence. *Journal of Political Economy, 109*.

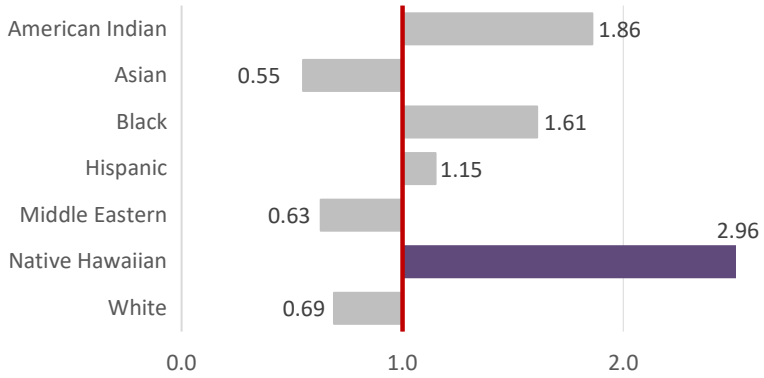
Figure 6. Search rates have generally declined for most racial groups 2017.



In 2021, approximately 1 out of every 37 stops (2.7% of all stops) performed by Portland Police Bureau on drivers included a discretionary search. Non-Traffic officers perform the bulk of searches associated with driver stops in the Bureau, accounting for about 93 percent of all searches conducted since 2017. The 2021 search rate is the lowest on record for the Portland Police Bureau, primarily due to the significant and consistent decline in overall searches conducted by Non-Traffic officers[55]. The number of searches conducted by Traffic officers have remained nearly stable over the past five years[56]. Drivers stopped in East Precinct (3.3% search rate) are significantly more likely[57] to be searched than those stopped in either Central Precinct (2.2% search rate) or North Precinct (2.2% search rate).

Portland Police Bureau officers showed significant differences[58] at how they searched drivers of different perceived race / ethnicities – but not at concerning disparate rates. Drivers perceived to be Black / African American were searched significantly more than White individuals – but not at a disparate rate in 2021. Historically, Bureau personnel have disparately searched Black / African American drivers, with three out of the last five years being identified as disparate. The only group overrepresented in searches when compared to their stop rates for the most recent year are drivers perceived to be Native Hawaiian or Other Pacific Islander; however, the group represents less than 1 percent of all stops and searches. No other perceived racial / ethnic group from either operational division was searched at significantly disparate rates.

Figure 7. Black / African American drivers have been searched at a disparate rate for three out of the last five years.



[55] $p < .001, r^2 = .99$
[56] $p < .39, r^2 = .26$
[57] $x^2 = 17.629, p < .001, df = 2$
[58] $x^2 = 23.844, p < .001, df = 4$

In 2021, less than two percent of drivers were asked to consent to a voluntary search; however, not all racial / ethnic groups were asked at the same frequency[59]. Drivers perceived to be either Black / African American were asked to consent to a search more significantly more than White drivers. Unlike in 2020, there were no significant differences[60] in the rate that members of different perceived racial / ethnic groups refused to consent to a search; however, Black / African American drivers were notably lower than any other perceived group of drivers. These findings are similar to results reported in the 2018, 2019, and 2020 Annual Stops Reports.

Table 7. Significant differences exist in consent search request rates across different perceived racial / ethnic groups.

	Consent Search			
Race/Ethnicity	**Requests**	**Rate**	**Refusals**	**Rate**
American Indian/Alaskan	0	0.0%	--	--
Asian	4	0.7%	2	50.0%
Black/African American	56	2.2%	7	12.5%
Hispanic or Latino	26	1.6%	7	26.9%
Middle Eastern	0	0.0%	--	--
Native Hawaiian	4	3.9%	1	25.0%
White	129	1.4%	26	20.2%
Total	**219**	**1.6%**	**43**	**19.6%**

Despite the slight improvement in the consent search denial rate for Black / African Americans in 2021, the troubling long-term issues related to voluntary consent of searches and the intersection with systemic and institutional racism embedded in the criminal justice system and law enforcement remain. In multiple jurisdictions across the country[61], individuals that are identified as Black / African American are asked to consent to searches at a higher rate than their White counterparts. These search requests are often not viewed as "voluntary" because of the power differential between law enforcement officials and searched subjects, and therefore the entire doctrine of consent search skews in favor of criminal justice systems at the expense of community members[62]. This is especially true for Black / African American individuals who receive advice at a young age[63] to comply with officer requests to avoid negative interactions with police[64]. Given the deep-seated and long-standing issues around systemic and institutional racism in our country, the Portland Police Bureau recognizes that the disparities exhibited in the data are unlikely to improve without direct and concerted actions.

The reduction in the consent search request rate and increase in the consent denial rate of Black / African American drivers during traffic stops in 2021 cannot be attributed to direct or concerted actions by the Bureau. The Portland Police Bureau has yet to implement the changes announced last year as part of a new consent search protocol[65], including providing a written notice of the subject's rights, generating an audio recording of the search consent, and document the search in a police report. Without these changes, or the publication of a new Portland Police Directive governing

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[59] $x^2 = 11.380, p < .02, df = 3$

[60] $x^2 = 2.714, p < .26, df = 2$

[61] Bandes, S. A. (2018). Police accountability and the problem of regulating consent searches. *University of Illinois Law Review, 1759*.

[62] Sommers, R. & Bohns, V.K. (2018). The voluntariness of voluntary consent: Consent searches and the psychology of compliance. *Yale Law Journal, 128*.

[63] Diaquoi, R. (2018). Symbols in the strange fruit seed: What "The Talk" Black parents have with their sons tells us about racism. *Harvard Educational Review, 87*.

[64] Harris, A. & Amutah-Onukagha, N. (2019). Under the radar: Strategies used by Black mothers to prepare their sons for potential police interactions. *Journal of Black Psychology, 45*.

[65] Portland Police Bureau. (2021, June 22). *Mayor and police chief announce PPB will change traffic enforcement, consent search protocols* [Press release]. https://www.portland.gov/wheeler/news/2021/6/22/mayor-and-police-chief-announce-ppb-will-change-traffic-enforcement-consent

(footnote continued)

consent searches, any change in these results can best be interpreted as natural variation and not conditional on any direct action by the Bureau in the last year.

Historically, Consent searches have been the most utilized search type in the Bureau, always representing at least half of all searches conducted. However, for the first time since data collection began in 2012, Consent searches (47.2% of all searches in 2021 and 1.3% of all driver stops in 2021) were displaced by Warrant Exception (59.8% of all searches in 2021 and 1.6% of all driver stops in 2021) searches as the top search method[66]. This is likely due to the 2019 Oregon Supreme Court ruling[67] that limited the ability of law enforcement personnel to conduct consent searches during legal stops – unless it was directly related to the reason for the stop or additional information was uncovered during the course of the stop. Bureau personnel received additional training on the updates to case law and were advised to end the formal stop interaction – and therefore, allowing the subject to leave if they wish – prior to requesting a consent search. Despite this guidance, the overall number of consent searches conducted by PPB personnel has only slightly dropped in the past two years. It is unclear if any of these consent search requests are occurring after the stop or if the stopped subjects are accurately perceiving the consent search request – if it occurs after the stop – as a new interaction, thereby giving them the freedom to leave the scene if they wish. The Bureau may need to consider giving additional training and guidance to personnel to ensure they are following new constraints on consent searches and they are accurately and fully informing search participants of their rights to leave the scene and/or deny the search request.

Table 8. Non-Traffic officers are significantly more likely to utilize Consent for a search, whereas Traffic officers are significantly more likely to use a Warrant Exception.

		Total Subjects Searched		Consent		Warrant		Warrant Exception	
	Race/Ethnicity	Searches	Rate	Count	Percent	Count	Percent	Count	Percent
Traffic	American Indian/Alaskan	0	0.0%	--	--	--	--	--	--
	Asian	0	0.0%	--	--	--	--	--	--
	Black/African American	4	0.8%	2	50.0%	0	0.0%	3	75.0%
	Hispanic or Latino	6	1.3%	1	16.7%	2	33.3%	4	66.7%
	Middle Eastern	0	0.0%	--	--	--	--	--	--
	Native Hawaiian	0	0.0%	--	--	--	--	--	--
	White	18	0.7%	5	27.8%	1	5.6%	17	94.4%
	Total	**28**	**0.8%**	**8**	**28.6%**	**3**	**10.7%**	**24**	**85.7%**

		Total Subjects Searched		Consent		Warrant		Warrant Exception	
	Race/Ethnicity	Searches	Rate	Count	Percent	Count	Percent	Count	Percent
Non-Traffic	American Indian/Alaskan	3	6.4%	0	0.0%	0	0.0%	3	100.0%
	Asian	9	2.2%	2	22.2%	2	22.2%	7	77.8%
	Black/African American	93	4.6%	47	50.5%	3	3.2%	52	55.9%
	Hispanic or Latino	42	3.7%	18	42.9%	5	11.9%	22	52.4%
	Middle Eastern	3	2.0%	0	0.0%	0	0.0%	3	100.0%
	Native Hawaiian	8	8.9%	3	37.5%	1	12.5%	5	62.5%
	White	187	2.9%	98	52.4%	7	3.7%	107	57.2%
	Total	**345**	**3.3%**	**168**	**48.7%**	**18**	**5.2%**	**199**	**57.7%**

- NOTE: More than one search type can be utilized and recorded on each interaction

[66] Beginning on June 27, 2018, officers could select more than one search type per search. Over the long term, this is likely to increase frequencies for all search types as officers often have multiple criteria present for legally conducting a search.

[67] Oregon v. Arreola-Botello. 64 Or. 695 (2019).

(footnote continued)

Searches conducted by Non-Traffic Officers were significantly more likely to utilize Consent[68] whereas Traffic Officers were significantly more likely to utilize a Warrant Exception[69]. Non-Traffic officers did not display any differential search patterns based on the perceived race / ethnicity of the subject for either Consent[70] or Warrant Exception[71] searches. Traffic Officers did not conduct enough searches in 2021 to conduct any pairwise analyses based on the perceived race / ethnicity of the subject.

Contraband Hit Rates

Over the past five years, Portland Police Bureau personnel have become significantly[72] more-effective at uncovering contraband during searches. In 2021, 62 percent of all searches ended with a PPB officer detecting prohibited material, including alcohol, drugs, stolen property, firearms[73], other weapons, and other illegal contraband – up from 40 percent in 2017. Officers from the Traffic Division have a substantially higher hit rate (78.7%) than Non-Traffic officers (60.9%); however, it was a non-significant difference[74]. Both divisions have been gradually improving hit rates over the past five years – significantly so for Non-Traffic officers[75]. Warrant and Warrant Exceptions searches are the most likely to discover contraband, while Consent searches are the least likely to be successful[76].

Table 9. Consent Searches are the least likely search type to uncover contraband.

	Total Searches	Found Contraband	
Search Type	Count	Count	Percent
Consent	176	90	51.1%
Warrant	21	19	90.5%
Warrant Exception	223	162	72.6%

Table 10. Drugs are the most commonly uncovered item during driver searches.

	Total Searches	Found Contraband		Alcohol		Drugs		Firearms		Other Weapons		Stolen Property		Other	
Race/Ethnicity	Count	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
American Indian/Alaskan	3	2	66.7%	0	0.0%	1	33.3%	0	0.0%	0	0.0%	0	0.0%	1	33.3%
Asian	9	7	77.8%	1	11.1%	4	44.4%	1	11.1%	0	0.0%	1	11.1%	2	22.2%
Black/African American	97	64	66.0%	17	17.5%	20	20.6%	30	30.9%	4	4.1%	5	5.2%	12	12.4%
Hispanic or Latino	48	25	52.1%	5	10.4%	11	22.9%	5	10.4%	2	4.2%	1	2.1%	5	10.4%
Middle Eastern	3	2	66.7%	1	33.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	33.3%
Native Hawaiian	8	5	62.5%	3	37.5%	2	25.0%	1	12.5%	1	12.5%	0	0.0%	1	12.5%
White	205	127	62.0%	36	17.6%	48	23.4%	21	10.2%	18	8.8%	13	6.3%	33	16.1%
Total	**373**	**232**	**62.2%**	**63**	**16.9%**	**86**	**23.1%**	**58**	**15.5%**	**25**	**6.7%**	**20**	**5.4%**	**55**	**14.7%**

The overall hit rates for each perceived racial group have generally increased over the last five years, with Black / African American and White subjects increasing at a significant rate[77]. The perceived race of the driver is not a significant predictor whether or not contraband will be found as there were no significant differences between the different groups for contraband hit rates[78]. There are also little differences in the found contraband between different perceived race / ethnic groups, with drugs and/or alcohol the most commonly recovered item across nearly all groups.

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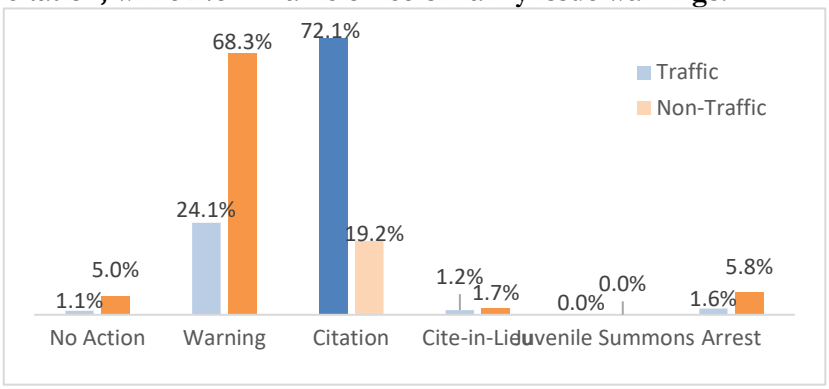
[68] $x^2 = 4.209, p < .05, df = 1$
[69] $x^2 = 8.465, p < .005, df = 1$
[70] $x^2 = 1.252, p < .54, df = 2$
[71] $x^2 = 0.331, p < .85, df = 2$
[72] $p < .02, r^2 = .88$
[73] Previously, firearm recoveries and other weapon recoveries were reported as a singular "weapons" category.
[74] $x^2 = 3.452, p < .07, df = 1$
[75] Non-Traffic: $p < .02, r^2 = .90$; Traffic: $p < .07, r^2 = .72$
[76] In prior years, statistical analyses were conducted to determine which search types were statistically significant in uncovering contraband. However, the search type field is now a multiple response variable, making it unsuitable for any statistical analysis between the different categories.
[77] Black: $p < .02, r^2 = .88$; White: $p < .03, r^2 = .85$
[78] $x^2 = 2.960, p < .23, df = 2$

Stop Outcomes

Stop disposition, or the outcome of the stop, is a common method to assess disparities among stops made by law enforcement personnel on different groups of people in a community. More locally, Portland community members have cited equitable stop outcomes as an important goal. In the 2009 plan to address racial profiling, community members raised concerns that traffic stops that result in no enforcement action can feel like harassment, especially to people of color. Large differences between racial and ethnic groups may imply an unequal impact on a particular race. Additionally, the progressive nature of a stop, and the multiple decision points within the interaction, make it difficult to discern what role, if any, implicit or explicit racial bias plays in stop disposition. To best account for the multiple decision points that occur within a stop interaction, multiple binary logistic regressions were run on stop disposition to better understand how perceived race, stop reason, search results, and the interactions between those variables, can contribute to the officer's decision to cite or arrest an individual.

The largest number of driver stops performed by PPB sworn personnel in 2021 (56.6%) resulted in a warning issued to the vehicle operator. Warnings have been generally increasing over the past five years while citations have decreased over the same time period – although at non-significant rates[79]. These changes in the long-term trends can generally be explained by the shifting workload across the Bureau and the general decline of the Traffic Division. In 2021 – as in prior years, the final disposition of the stop varies significantly[80] based on the organization unit making the stop, with Traffic officers significantly more likely to dispense a citation with Non-Traffic more likely to use every other disposition type. As the number of stops performed by Traffic Officers continue to decline to personnel realignments in the Bureau, its' expected that the number of citations awarded will continue to decline at a similar rate since that is their primary enforcement mechanism. No individual stop disposition has seen a significant increase or decrease the past five years.

Figure 8. Traffic officers end most of their interactions with a citation, while Non-Traffic officers mainly issue warnings.



For subjects that were searched by Non-Traffic Officers, the recovery of contraband was the sole significant predictor[81] if the driver was arrested at the end of the interaction[82] – even when accounting for the race of the driver, if probable cause or reasonable suspicion for another crime was present, the severity of the traffic crime, and the interaction between these variables in a mixed-effects model. The positive relationship between the discovery of contraband and likelihood of being arrested has been a stable predictor over multiple years of analysis, indicating its continuous

[79] Warnings: $p < .26$, $r^2 = .39$; Citations: $p < .24$, $r^2 = .42$
[80] $x^2 = 3457.400$, $p < .001$, $df = 4$
[81] $Wald = 12.853$, $B = 1.046$, $p < .001$
[82] Omnibus Test: $x^2 = 56.766$, $p < .001$, $df = 20$, $r^2 = .191$
(footnote continued)

role in the decision-making process of officers when choosing to arrest. In 2021, 72 percent of the individuals discovered with contraband were arrested, representing about 19 percent of all arrested subjects. For subjects that were not searched[83], being stopped with probable cause / reasonable suspicion of another crime was the only significant predictor of being arrested[84]. About 35 percent of subjects stopped for some other crime – but not searched – were arrested in 2021.

Table 11. Non-Traffic officers are significantly more likely to arrest a stopped driver while Traffic officers are significantly more likely to issue a citation.

		Total Stops		Enforcement Action											
				None		Warning		Citation		Cite-in-Lieu		Juvenile Summons		Arrested	
	Race/Ethnicity	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Traffic	American Indian/Alaskan	14	0.4%	0	0.0%	4	28.6%	9	64.3%	1	7.1%	0	0.0%	0	0.0%
	Asian	203	5.4%	4	2.0%	53	26.1%	144	70.9%	0	0.0%	0	0.0%	2	1.0%
	Black/African American	472	12.7%	4	0.8%	128	27.1%	320	67.8%	9	1.9%	0	0.0%	11	2.3%
	Hispanic or Latino	451	12.1%	1	0.2%	108	23.9%	331	73.4%	3	0.7%	0	0.0%	8	1.8%
	Middle Eastern	30	0.8%	0	0.0%	7	23.3%	23	76.7%	0	0.0%	0	0.0%	0	0.0%
	Native Hawaiian	13	0.3%	0	0.0%	5	38.5%	8	61.5%	0	0.0%	0	0.0%	0	0.0%
	White	2,542	68.2%	30	1.2%	591	23.2%	1,850	72.8%	32	1.3%	0	0.0%	39	1.5%
	Total	**3,725**	**100.0%**	**39**	**1.0%**	**896**	**24.1%**	**2,685**	**72.1%**	**45**	**1.2%**	**0**	**0.0%**	**60**	**1.6%**

		Total Stops		Enforcement Action											
				None		Warning		Citation		Cite-in-Lieu		Juvenile Summons		Arrested	
	Race/Ethnicity	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Non-Traffic	American Indian/Alaskan	47	0.5%	2	4.3%	33	70.2%	7	14.9%	1	2.1%	0	0.0%	4	8.5%
	Asian	402	3.9%	12	3.0%	295	73.4%	77	19.2%	4	1.0%	0	0.0%	14	3.5%
	Black/African American	2,037	19.8%	94	4.6%	1,487	73.0%	278	13.6%	45	2.2%	0	0.0%	133	6.5%
	Hispanic or Latino	1,150	11.2%	40	3.5%	765	66.5%	250	21.7%	22	1.9%	2	0.2%	71	6.2%
	Middle Eastern	149	1.4%	2	1.3%	92	61.7%	52	34.9%	2	1.3%	0	0.0%	1	0.7%
	Native Hawaiian	90	0.9%	4	4.4%	60	66.7%	15	16.7%	1	1.1%	0	0.0%	10	11.1%
	White	6,428	62.4%	356	5.5%	4,307	67.0%	1,302	20.3%	99	1.5%	1	0.0%	363	5.6%
	Total	**10,303**	**100.0%**	**510**	**5.0%**	**7,039**	**68.3%**	**1,981**	**19.2%**	**174**	**1.7%**	**3**	**0.0%**	**596**	**5.8%**

A simple effects logistic regression model was also used to help determine what factors may significantly influence a Non-Traffic officer to end the interaction without enforcement (warning or citation) when an arrest is not made[85]. People stopped for probable cause / reasonable suspicion of a non-traffic crime are significantly more likely to receive no enforcement action than those stopped for traffic crimes[86], as nearly 39 percent of people stopped for non-traffic incidents were released without a warning or a citation while only 5 percent of those stopped for a traffic offense were released with no enforcement action. This specific measure highlights how Non-Traffic officers utilize traffic stops to investigate broader criminal activity in the City of Portland. Often times, patrol officers receive limited information on suspects or people of interest related to a crime, such as a generic description of a motor vehicle's model, shape, color, and/or age. The high release rate of individuals stopped for non-traffic offenses indicate that after identifying the stopped driver, they were determined to not have been involved in some other crime.

Drivers perceived to be Hispanic or Latino were significantly more likely to receive a warning or citation than other groups of drivers[87] when stopped by Non-Traffic officers. The effect is seen across all stop severities; however, it is most pronounced with more minor infractions as White drivers are about twice as likely to receive no enforcement action on a Non-Moving Violation than Latino drivers and more than ten times as likely on Minor Moving Violations. These are not isolated results - the State of Oregon Criminal Justice Commission has reported similar disparities for drivers

[83] Omnibus Test: $x^2 = 202.266, p < .001, df = 9, r^2 = .057$
[84] $Wald = 152.926, B = 2.073, p < .001$
[85] Omnibus Test: $x^2 = 194.022, p < .001, df = 10, r^2 = .059$
[86] $Wald = 151.724, B = 2.327, p < .001$
[87] $Wald = 8.656, B = -0.512, p < .004$
(footnote continued)

perceived to be Hispanic or Latino throughout the State in the yearly analysis[88] of traffic stop data published on its open data dashboard[89]. One potential factor that could be contributing to the dispartity is the English-Spanish language barrier, as language is commonly cited as a barrier in interactions between law enforcement officials and Spanish-speaking individuals[90]. In the City of Portland, about 22 percent of Hispanic or Latino residents report speaking English less than "very well."[91] Heavier accents can exacerbate this problem, as it may lead communication difficulties with the officer, which may be interpreted as non-compliance or non-contrition and increase the likelihood that the officer gives a ticket[92]. Portland Police Bureau personnel have access to interpreters to help mitigate these circumstances. However, it is not possible to determine how often language barriers are contributing to the stop outcome for Hispanic or Latino drivers, how often translation services are used during the course of a traffic stop, or if the translation services change the nature of the interaction. The intersection of differential stop outcomes for Hispanic or Latino subjects, language, and communication abilities could also be indicative of issues related to systemic and institutional racism in law enforcement agencies across the United States. The Bureau should consider conducting additional research and outreach with community advocacy groups to develop training and policies that would improve our understaning of the factors contributing to this disparity and improve equitable outcomes for stopped Hispanic or Latino drivers.

The limited number of stops performed by Traffic Officers in 2021 preclude comprehensive statistical analysis on all outcomes except the decision to issue a citation vs. a warning or no enforcement[93]. Overall, a mixed-effects model revealed the Traffic Officers were much significantly more likely to issue a citation when the driver committed a Dangerous Driving Behavior[94], as those actions earned a citation 77 percent of the time compared to a citation rate of 60 percent of Minor Moving Violations and 38 percent of the time for Non-Moving Violations. Concerningly, the trend of significant over-representation of Hispanics or Latinos with citations – especially when stopped for Dangerous Driving Behaviors[95] – was also observed in Traffic Division stops in 2021. Drivers perceived to be Hispanic or Latino were issued a citation 81 percent of the time while Asian (78.8%), Black / African American (71.8%), and White (77.1%) drivers were all issued citations at lower rates. Given the same inequitable trend of issuing citations at a higher rate to Hispanic or Latino drivers is manifested across the Bureau, it is recommended that additional training and guidance is developed to ensure equitable stop outcomes across all different perceived race / ethnic groups of drivers.

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[88] Oregon Criminal Justice Commission. (2021, December 1). *Statistical Transparency of Policing Report: Per House Bill 2355 (2017).*

[89] Oregon Criminal Justice Commission. (2021, December 1). Statistical Transparency of Policing: S.T.O.P. Descriptives. Stop Reason & Outcome – All. https://www.oregon.gov/cjc/SAC/Pages/stop.aspx.

[90] Correia, M.E. (2010). Determinants of attitudes toward police of Latino immigrants and non-immigrants. *Journal of Criminal Justice, 38,* 99 – 107.

[91] U.S. Census Bureau. (2021). 2016 – 2020 American Community Survey 5-Year Estimates. Table B16006: Language Spoken at Home by Ability to Speak English for the Population 5 Year and Over (Hispanic or Latino). U.S. Census Bureau, American Community Survey.

[92] Giles, H., Linz, D., Bonilla, D., & Gomez, M.L. (2012). Police stops of and interactions with Latino and White (non-Latino) drivers: Extensive policing and communication accommodation. *Communication Monographs, 79*(4), 407 – 427.

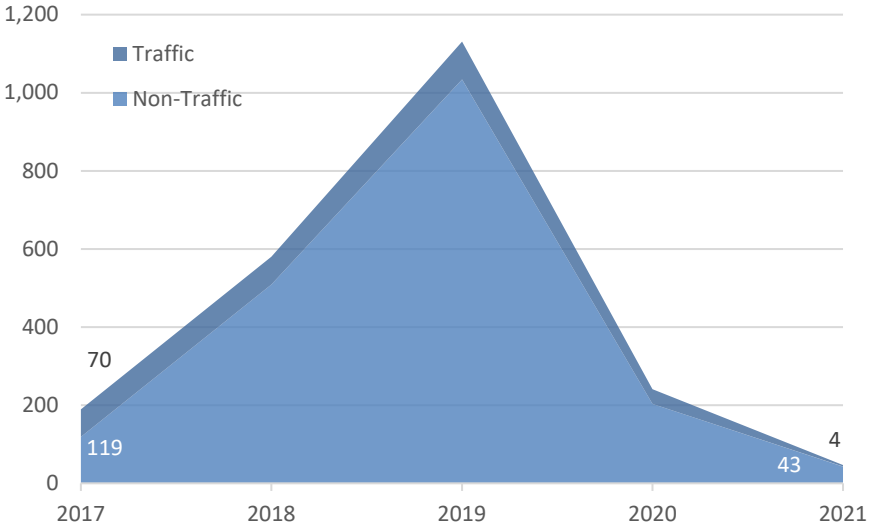
[93] Omnibus Test: $x^2 = 145.087, p < .001, df = 21, r^2 = .058$

[94] $Wald = 40.581, B = 0.674, p < .001$

[95] $Wald = 11.788, B = 0.994, p < .002$

In 2021, Portland Police Bureau officers reported stopping 47 pedestrians[96] - an 80 percent decrease over the prior year. After reaching an all-time high in 2019, the Bureau has quickly reached an all-time two years later. Traffic and Non-Traffic officers both decreased the total number of pedestrian stops performed in 2021; however, the decline from officers assigned patrol, investigative, and support units was more pronounced.

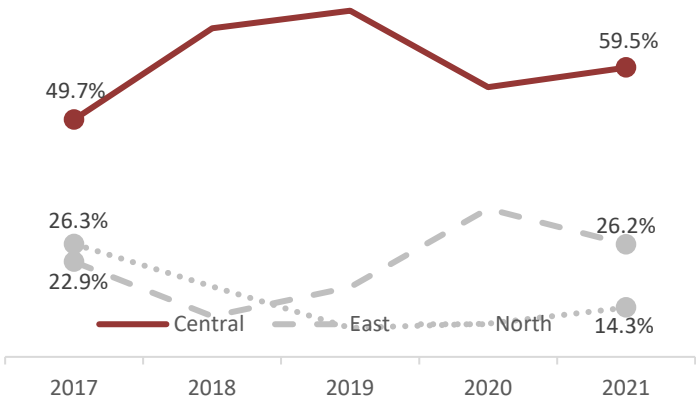
Figure 9. Pedestrian stops decreased by 80 percent in 2021.



Stop Locations

Central Precinct is the primary location for pedestrian stops completed by PPB officers in the City of Portland. For the past five years, the largest number of pedestrian stops occurred in the Precinct and it has accounted for a majority of the stops over the past four years. The precinct encompasses a number of highly-trafficked pedestrian-friendly areas, including Downtown, SE Hawthorne Blvd., and NW 23rd St., where sworn personnel are more likely to encounter people walking in the area.

Figure 10. Central Precinct has been the primary location for pedestrian stops over the past five years



Stopped Pedestrian Demographics

Portland Police Bureau officers contact pedestrians in support of the broad operational mission for their divisions, namely road safety for Traffic officers and crime response and prevention for Non-Traffic officers. However, it is more difficult to determine the appropriate benchmark for

[96] All "pedestrian" analyses also include stops of subjects on a bicycle.

comparison to stop demographic statistics as there is no commonly utilized measure in academic literature. Population demographics from the decennial Census and associated products (such as the American Community Survey) do not account for visitors, commuters, and houseless individuals in the area, which can be especially problematic since people of color are more likely to utilize public transportation or walk to commute to work (see Appendix D). The small number of pedestrian stops proves problematic as the stopped individuals are not likely to be a random sampling across a city or precinct and be heavily weighted by officers that patrol more pedestrian-friendly districts. Due to these methodological challenges, no disparity analysis was conducted on pedestrian stops.

Table 12. Pedestrian stop rates for perceived racial / ethnic groups has remained steady over the last five years.

		2017		2018		2019		2020		2021	
	Race/Ethnicity	**Count**	**Percent**	**Count**	**Percent**	**Count**	**Percent**	**Count**	**Percent**	**Count**	**Percent**
Traffic	American Indian/Alaskan	0	0.0%	2	2.8%	1	1.0%	0	0.0%	0	0.0%
	Asian	3	4.3%	4	5.6%	3	3.1%	2	5.3%	0	0.0%
	Black/African American	6	8.6%	7	9.9%	7	7.2%	9	23.7%	0	0.0%
	Hispanic or Latino	3	4.3%	1	1.4%	2	2.1%	2	5.3%	0	0.0%
	Middle Eastern*	--	--	0	0.0%	2	2.1%	0	0.0%	0	0.0%
	Native Hawaiian*	--	--	0	0.0%	0	0.0%	0	0.0%	0	0.0%
	White	55	78.6%	56	78.9%	82	84.5%	25	65.8%	4	100.0%
	Unknown/Other^	3	4.3%	1	1.4%	--	--	--	--	--	--
	Traffic Total	**70**	**100%**	**71**	**100%**	**97**	**100%**	**38**	**100%**	**4**	**100%**

		2017		2018		2019		2020		2021	
	Race/Ethnicity	**Count**	**Percent**	**Count**	**Percent**	**Count**	**Percent**	**Count**	**Percent**	**Count**	**Percent**
Non-Traffic	American Indian/Alaskan	1	0.8%	13	2.6%	23	2.2%	4	2.0%	2	4.7%
	Asian	2	1.7%	8	1.6%	10	1.0%	1	0.5%	0	0.0%
	Black/African American	28	23.5%	89	17.5%	171	16.5%	37	18.2%	8	18.6%
	Hispanic or Latino	6	5.0%	29	5.7%	62	6.0%	12	5.9%	2	4.7%
	Middle Eastern*	--	--	3	0.6%	0	0.0%	0	0.0%	0	0.0%
	Native Hawaiian*	--	--	3	0.6%	4	0.4%	1	0.5%	0	0.0%
	White	80	67.2%	363	71.3%	764	73.9%	148	72.9%	31	72.1%
	Unknown/Other^	2	1.7%	1	0.2%	--	--	--	--	--	--
	Non-Traffic Total	**119**	**100%**	**509**	**100%**	**1,034**	**100%**	**203**	**100%**	**43**	**100%**

* Middle Eastern and Native Hawaiian options were added as an available option on June 27, 2018.

^ Unknown / Other options were removed as an available option on June 27, 2018.

Across all divisions, there have been virtually no changes in the stop demographics of pedestrians over the last five years. No perceived racial / ethnic group significantly increased, or decreased, over the time period. Pedestrians perceived to be White (74.5% in 2021) have consistently been the most stopped group, followed by Black / African Americans (17.0%) and Hispanic or Latino (4.3%) pedestrians. No other perceived group has represented more than 5 percent of all pedestrian stops over the past five years. The limited number of pedestrian stops prevented any inferential statistical analysis based on the demographics of the stopped pedestrian.

Pedestrian Stop Reasons

In 2021, the majority of pedestrians (53.2%) were stopped based on the reasonable suspicion or probably cause of their involvement for another crime without an accompanying traffic violation. This is significantly different[97] than the reasons given for driver stops and highlights the varying purpose of pedestrian stops. Historically, PPB officers have always stopped pedestrians at a higher rate for Non-Traffic offenses. By their very nature, pedestrian stops are often focused on apprehending and identifying known or suspected suspects because without the aid of a moving motor vehicle, individuals are more easily identified. No additional analyses could be conducted on the stop reasons for pedestrians – including disaggregation by race and organizational unit – due to a limited sample size.

Table 13. The majority of pedestrians were stopped for Non-Traffic Offenses in 2021.

		Traffic Reason Only		Traffic and Other Crime		Non-Traffic Offense Only	
	Race/Ethnicity	Count	Percent	Count	Percent	Count	Percent
Traffic	American Indian/Alaskan	0	0.0%	0	0.0%	0	0.0%
	Asian	0	0.0%	0	0.0%	0	0.0%
	Black/African American	0	0.0%	0	0.0%	0	0.0%
	Hispanic or Latino	0	0.0%	0	0.0%	0	0.0%
	Middle Eastern	0	0.0%	0	0.0%	0	0.0%
	Native Hawaiian	0	0.0%	0	0.0%	0	0.0%
	White	3	75.0%	0	0.0%	1	25.0%
	Total	**3**	**75.0%**	**0**	**0.0%**	**1**	**25.0%**

		Traffic Reason Only		Traffic and Other Crime		Non-Traffic Offense Only	
	Race/Ethnicity	Count	Percent	Count	Percent	Count	Percent
Non-Traffic	American Indian/Alaskan	1	50.0%	0	0.0%	1	50.0%
	Asian	0	0.0%	0	0.0%	0	0.0%
	Black/African American	2	25.0%	0	0.0%	6	75.0%
	Hispanic or Latino	1	50.0%	0	0.0%	1	50.0%
	Middle Eastern	0	0.0%	0	0.0%	0	0.0%
	Native Hawaiian	0	0.0%	0	0.0%	0	0.0%
	White	15	48.4%	0	0.0%	16	51.6%
	Total	**19**	**44.2%**	**0**	**0.0%**	**24**	**55.8%**

Table 14. Minor Moving Violations are the most common traffic stop reason for pedestrians.

		Moving Violations				Non-Moving Violations		Non-Traffic Offenses	
		Dangerous		Minor					
	Race/Ethnicity	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Traffic	American Indian/Alaskan	0	0.0%	0	0.0%	0	0.0%	0	0.0%
	Asian	0	0.0%	0	0.0%	0	0.0%	0	0.0%
	Black/African American	0	0.0%	0	0.0%	0	0.0%	0	0.0%
	Hispanic or Latino	0	0.0%	0	0.0%	0	0.0%	0	0.0%
	Middle Eastern	0	0.0%	0	0.0%	0	0.0%	0	0.0%
	Native Hawaiian	0	0.0%	0	0.0%	0	0.0%	0	0.0%
	White	2	50.0%	1	25.0%	0	0.0%	1	25.0%
	Total	**2**	**50.0%**	**1**	**25.0%**	**0**	**0.0%**	**1**	**25.0%**

		Moving Violations				Non-Moving Violations		Non-Traffic Offenses	
		Dangerous		Minor					
	Race/Ethnicity	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Non-Traffic	American Indian/Alaskan	1	50.0%	0	0.0%	0	0.0%	1	50.0%
	Asian	0	0.0%	0	0.0%	0	0.0%	0	0.0%
	Black/African American	0	0.0%	1	12.5%	1	12.5%	6	75.0%
	Hispanic or Latino	1	50.0%	0	0.0%	0	0.0%	1	50.0%
	Middle Eastern	0	0.0%	0	0.0%	0	0.0%	0	0.0%
	Native Hawaiian	0	0.0%	0	0.0%	0	0.0%	0	0.0%
	White	4	12.9%	8	25.8%	3	9.7%	16	51.6%
	Total	**6**	**14.0%**	**9**	**20.9%**	**4**	**9.3%**	**24**	**55.8%**

[97] $x^2 = 965.312, p < .001, df = 1$

Search Rates

Pedestrians stopped by PPB officers are significantly more likely[98] to be searched than their driver counterparts, as 17 percent of all pedestrian stops ended in a search in 2021. Total pedestrian searches have decreased, but non-significantly, since 2017[99] when 23 percent of all stops ended in a search. A reduced sample size of pedestrian stops from Traffic Officers prevented any statistical analyses to determine differences between the two operation groups or the perceived race / ethnicity of the stopped pedestrian. Consent was the only search type utilized in 2021.

Table 15. Twenty percent of pedestrians denied a consent search in 2021.

	Consent Search			
Race/Ethnicity	Requests	Rate	Refusal	Rate
American Indian/Alaskan	0	0.0%	--	--
Asian	--	--	--	--
Black/African American	1	12.5%	1	100.0%
Hispanic or Latino	1	50.0%	0	0.0%
Middle Eastern	--	--	--	--
Native Hawaiian	--	--	--	--
White	8	22.9%	1	12.5%
Total	**10**	**5.8%**	**2**	**20.0%**

Table 16. Every pedestrian searched in 2021 was done with consent of the subject.

		Total Subjects Searched		Consent		Warrant		Warrant Exception	
	Race/Ethnicity	Searches	Rate	Count	Percent	Count	Percent	Count	Percent
Traffic	American Indian/Alaskan	--	--	--	--	--	--	--	--
	Asian	--	--	--	--	--	--	--	--
	Black/African American	--	--	--	--	--	--	--	--
	Hispanic or Latino	--	--	--	--	--	--	--	--
	Middle Eastern	--	--	--	--	--	--	--	--
	Native Hawaiian	--	--	--	--	--	--	--	--
	White	0	0.0%	--	--	--	--	--	--
	Total	**0**	**0.0%**	**--**	**--**	**--**	**--**	**--**	**--**

		Total Subjects Searched		Consent		Warrant		Warrant Exception	
	Race/Ethnicity	Searches	Rate	Count	Percent	Count	Percent	Count	Percent
Non-Traffic	American Indian/Alaskan	0	0.0%	--	--	--	--	--	--
	Asian	--	--	--	--	--	--	--	--
	Black/African American	0	0.0%	--	--	--	--	--	--
	Hispanic or Latino	1	50.0%	1	100.0%	0	0.0%	0	0.0%
	Middle Eastern	--	--	--	--	--	--	--	--
	Native Hawaiian	--	--	--	--	--	--	--	--
	White	7	22.6%	7	100.0%	0	0.0%	0	0.0%
	Total	**8**	**18.6%**	**8**	**100.0%**	**0**	**0.0%**	**0**	**0.0%**

- NOTE: More than one search type can be utilized and recorded on each interaction

[98] $x^2 = 36.689, p < .001, df = 1$

[99] $p < .27, r^2 = .38$

Contraband Hit Rates

Illegal contraband was found on a majority of pedestrians searched by PPB personnel in 2021. The hit rate in 2021 was the most successful on record; however, pedestrian searches have always been mostly successful, with the majority of searches since 2017 uncovering contraband. Unspecified "other" contraband was the most commonly recovered item type in 2021. There were too few pedestrian stops and searches conducted in 2021 for any statistical analyses to discern if any differences exist between the perceived race / ethnicity groups and the different organizational divisions of the Bureau.

Table 17. Other contraband and stolen property were the only contraband recovered in 2021.

	Total Searches	Found Contraband		Alcohol		Drugs		Firearms		Other Weapons		Stolen Property		Other	
Race/Ethnicity	Count	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
American Indian/Alaskan	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Asian	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Black/African American	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hispanic or Latino	1	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%
Middle Eastern	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Native Hawaiian	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
White	7	6	85.7%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	28.6%	4	57.1%
Total	**8**	**7**	**87.5%**	**0**	**0.0%**	**0**	**0.0%**	**0**	**0.0%**	**0**	**0.0%**	**2**	**25.0%**	**5**	**62.5%**

Stop Outcomes

A plurality of stopped pedestrians in 2021 were issued a warning at the end of their interaction (46.8%). Warnings have always been the most common disposition type among pedestrians, however they have not significantly changed over the past five years[100]. No other disposition type has significantly increased or decreased over the time period. No additional analyses – including a comparison between pedestrians and drivers, the different organizational divisions of the PPB, or the perceived race / ethnicity of the stopped pedestrian – could be conducted in 2021 due to the small pedestrian stop rates.

Table 18. A Warning or Arrest were the two most common pedestrian stop dispositions in 2021.

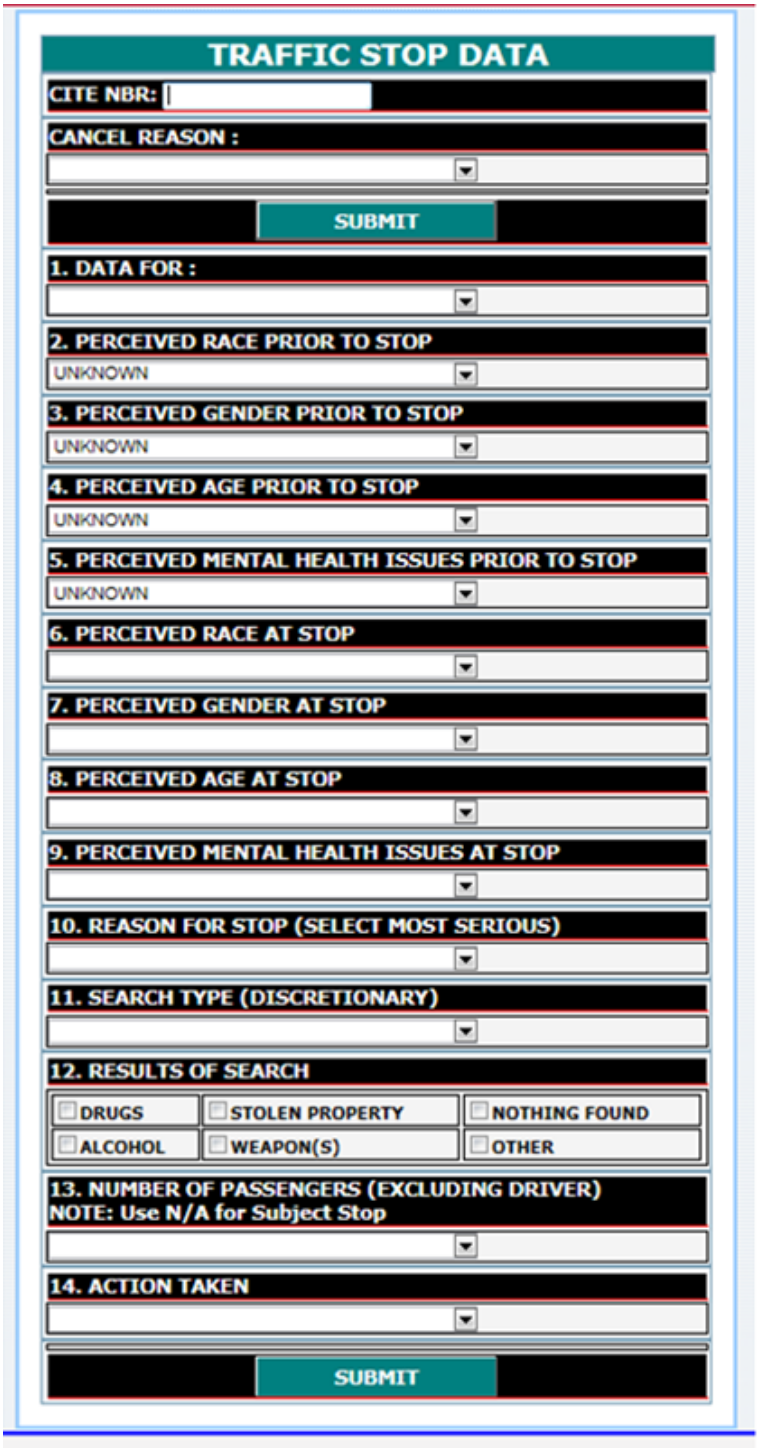
		Total Stops		Enforcement Action											
				None		Warning		Citation		Cite-in-Lieu		Juvenile Summons		Arrested	
	Race/Ethnicity	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Traffic	American Indian/Alaskan	0	0.0%	--	--	--	--	--	--	--	--	--	--	--	--
	Asian	0	0.0%	--	--	--	--	--	--	--	--	--	--	--	--
	Black/African American	0	0.0%	--	--	--	--	--	--	--	--	--	--	--	--
	Hispanic or Latino	0	0.0%	--	--	--	--	--	--	--	--	--	--	--	--
	Middle Eastern	0	0.0%	--	--	--	--	--	--	--	--	--	--	--	--
	Native Hawaiian	0	0.0%	--	--	--	--	--	--	--	--	--	--	--	--
	White	4	100.0%	0	0.0%	1	25.0%	2	50.0%	0	0.0%	0	0.0%	1	25.0%
	Total	**4**	**100.0%**	**0**	**0.0%**	**1**	**25.0%**	**2**	**50.0%**	**0**	**0.0%**	**0**	**0.0%**	**1**	**25.0%**

		Total Stops		Enforcement Action											
				None		Warning		Citation		Cite-in-Lieu		Juvenile Summons		Arrested	
	Race/Ethnicity	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Non-Traffic	American Indian/Alaskan	2	4.7%	0	0.0%	2	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
	Asian	0	0.0%	--	--	--	--	--	--	--	--	--	--	--	--
	Black/African American	8	18.6%	2	25.0%	4	50.0%	0	0.0%	0	0.0%	0	0.0%	2	25.0%
	Hispanic or Latino	2	4.7%	0	0.0%	1	50.0%	1	50.0%	0	0.0%	0	0.0%	0	0.0%
	Middle Eastern	0	0.0%	--	--	--	--	--	--	--	--	--	--	--	--
	Native Hawaiian	0	0.0%	--	--	--	--	--	--	--	--	--	--	--	--
	White	31	72.1%	4	12.9%	14	45.2%	4	12.9%	4	12.9%	0	0.0%	5	16.1%
	Total	**43**	**100.0%**	**6**	**14.0%**	**21**	**48.8%**	**5**	**11.6%**	**4**	**9.3%**	**0**	**0.0%**	**7**	**16.3%**

[100] $p < .84$, $r^2 = .02$

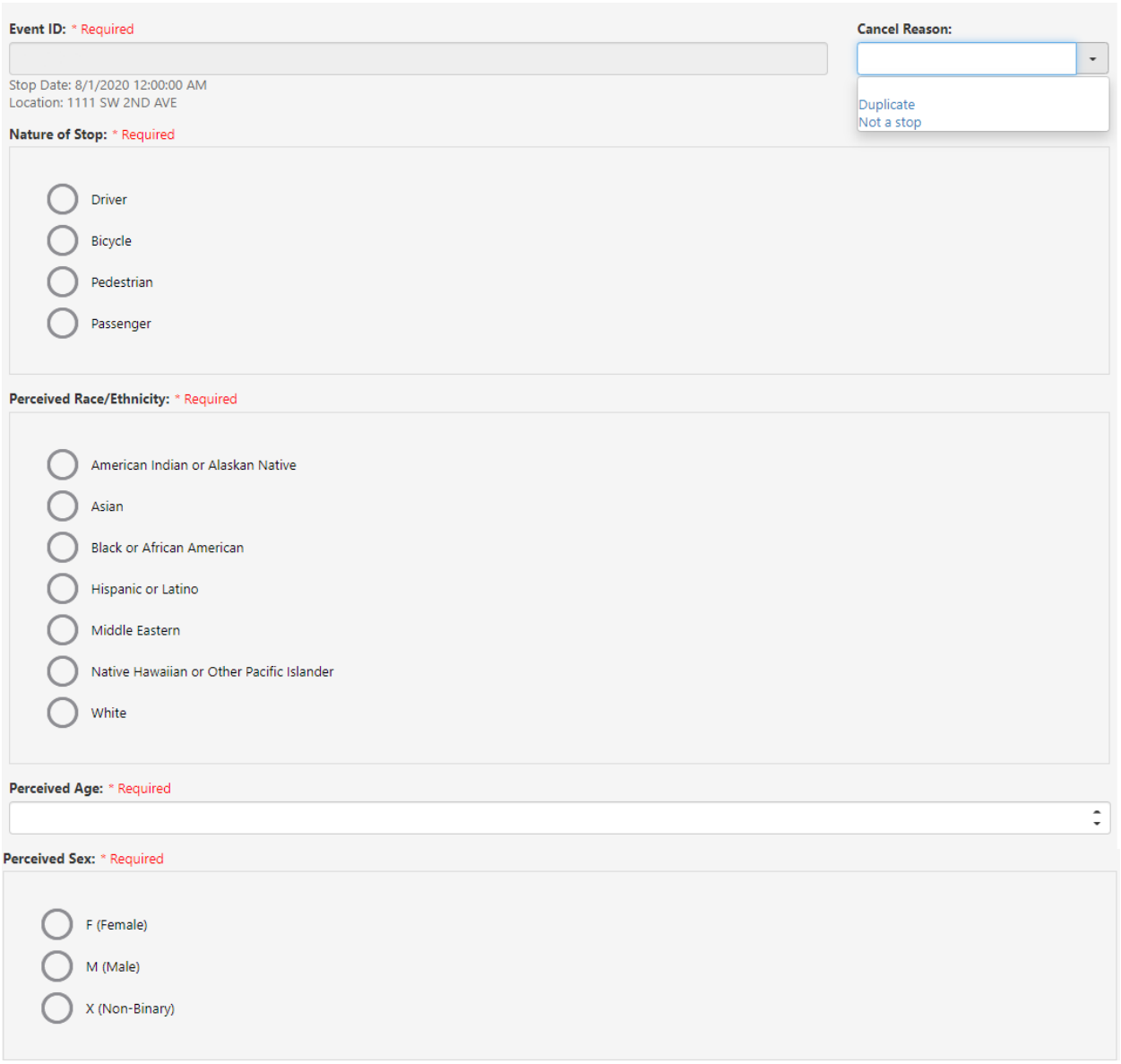
APPENDIX A: STOPS DATA COLLECTION MASK

The Stops Data Collection (SDC) system was in place from late 2011 through June 27, 2018.



APPENDIX B: STOPS APPLICATION

The STOPs data collection tool was launched on June 27, 2018. The tool was modified on December 21, 2020 to refine the questions related to reason for stop, search type categories, and whether an arrest was mandatory.



Reason for Stop: * Required

- [ ] Probable Cause of a Traffic Crime or Violation
- [ ] Probable Cause of Other Crime
- [ ] Reasonable Suspicion of Other Crime

Probable Cause of a Traffic Crime or Violation: * Required

Probable Cause of Other Crime: * Required

Reasonable Suspicion of Other Crime: * Required

Consent search: * Required

- ( ) No consent search requested
- ( ) Consent search requested but denied
- ( ) Consent search completed

Other Search Criteria (select all that apply): * Required

- [ ] None
- [ ] Field Sobriety Test
- [ ] Search Warrant
- [ ] Warrant Exception: Emergency Aid Doctrine / Community Caretaking
- [ ] Warrant Exception: Exigent Circumstances / Automobile (Motor Vehicle) / Hot Pursuit
- [ ] Warrant Exception: Incident to Arrest
- [ ] Warrant Exception: Inevitable Discovery
- [ ] Warrant Exception: Inventory
- [ ] Warrant Exception: Open Fields / Abandoned or Lost Property

Search Findings (select all that apply): * Required

- [ ] Nothing Found
- [ ] Alcohol
- [ ] Drugs
- [ ] Stolen Property
- [ ] Other Evidence
- [ ] Weapon(s) - Firearm
- [ ] Weapon(s) - Other

Stop Disposition: * Required

- ( ) No Action Taken
- ( ) Warning (Verbal or Written)
- ( ) Citation
- ( ) Cite-in-Lieu
- ( ) Juvenile Summons
- ( ) Arrest

Was this a mandatory arrest related to a warrant, restraining order violation, or domestic violence incident?: * Required

- ( ) Yes
- ( ) No

Did the subject of the stop have a perceived mental health issue?: * Required

- ( ) Yes
- ( ) No
- ( ) Unknown

✔ Submit | Cancel

APPENDIX C: DATA AND METHODOLOGY

Data Collection History

During the 69th Legislative Assembly in 1997, the Oregon State Legislature passed HB 2433 which required all law enforcement agencies to adopt specific policies prohibiting stops and searches "motivated by the officer's perception of race, color, sex, or national origin" and to collect data on the topic. The Traffic Stop Data Collection committee, of the Governor's Public Safety Planning and Policy Council, formed the minimum standards for a voluntary data collection program for stopped subject demographics. The work of that committee, with input from community partners and law enforcement agencies around the state, lead to the development and passage of SB 415 in 2001 which encouraged law enforcement to voluntarily create and launch a standardized stops data collection program and provide public reports on demographics and stop outcomes. Concurrently in the year 2000, a panel of community leaders and PPB representatives was convened to help reduce concerns regarding racial profiling in the City of Portland. The Blue Ribbon Panel recommended the Bureau create a data collection documenting the perceived demographics of the stopped subject and police actions during the stop, including search and outcome information.

Sworn personnel from the Portland Police Bureau first began reporting subject demographics, search patterns, and stop outcomes on all officer-initiated driver, pedestrian, and bicycle stops (initially termed "contacts') in 2001. The data collection process went through minor revisions until February 2003 with the launch of the Stops Data Collection (SDC) system – the first Bureau-wide standardized system that was integrated and accessible with issued Mobile Digital Computers (MDCs). The Stops Data Collection operated untouched for the next 8 years until Late 2011 when the system was updated with an automated auditing and tracking tool to increase accountability and compliance with Bureau data collection policies. The new SDC (see Appendix A) also increased the number of data collection points to better reflect national best-practices.

In 2017, the 79th Legislative Assembly of the Oregon State Legislature passed HB 2355 (codified as ORS 131.930 through 131.945) which instituted the first mandatory data collection policy for all law enforcement agencies in the State beginning on June 1, 2018 for large agencies such as the Portland Police Bureau. The law mandated minor changes[101] to PPB's data collection to become compliant with the new State standards. The Bureau also took the opportunity to refine, modernize, and enhance the existing Stops Data Collection (SDC) system before launching the new Stops application (see Appendix B) on June 27, 2018. The application also submits a copy of all Stops records quarterly to the State of Oregon Criminal Justice Commission (CJC) for mandatory reporting and analysis.

On December 21, 2020, PPB modified to Stops Data Collection system to collect additional data points that provide additional clarity and detail on what happens during the interaction. The Bureau added multiple fields for the reason for Stop, specifically to allow officers to provide the exact statute when a Stop is made on the basis of probable cause or reasonable suspicion of a crime in addition to any traffic violations or crimes committed. The Bureau also added a question asking if the arrest was a mandatory arrest based on Oregon law, which could help explain differences in the arrest rates for Stops. Finally, the Bureau transitioned the search type categories to match the legal

[101] About 85 percent of required data points were already being collected by the Bureau prior to HB 2355.

definitions for legal search reasons, including warrants, warrant exceptions, and consent searches. This change simplifies the training and understanding needed to complete the Stops mask and will lead to more accurate search data analysis.

Data Source

The Stops application, like the SDC before it, is an automated auditing and tracking tool that flags interactions that require a completed "mask", or survey. Interactions are flagged for completion when (1) Traffic officers issue an electronic Warning or Citation through their handheld devices or (2) Non-Traffic officers notify dispatch they are making a formal stop of a driver or pedestrian (using the call codes of "TRASTP" or "77", respectively) when probable cause has been established for a violation or criminal act. The flagged records appear on a list of to-do items for the officer to complete on their Bureau-issued computer and remain there until the officer completes the mask, ideally immediately following the conclusion of the stop or at the end of their shift for motorcycle- or bicycle-based officers. Supervisors throughout the Bureau receive a weekly email highlighting stops reports that are outstanding to ensure complete data collection.

Through the lifespan of the Stops Data Collection system from January 1, 2012 through June 26, 2018, law enforcement personnel completed 351,595 masks related to the contact of a community member. The majority of masks (85.7%) represented completed driver or pedestrian stops, with a smaller number of interactions that were flagged by the system as a formal stop when it was actually another type of interaction (13.6%), including a flag down, mere conversation, or welfare check. Completed stops flagged as passenger stops or stops initiated by officers from other law enforcement agencies were also excluded from all analyses.

Table 19. About 85 percent of flagged interactions are verified as legitimate stops in the SDC system.

	2012		2013		2014		2015		2016		2017		2018	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Completed Stops	68,968	89.4%	68,053	89.1%	53,190	83.7%	31,474	78.8%	32,737	82.3%	22,470	82.6%	14,729	82.8%
Passenger Stops	447	0.6%	361	0.5%	309	0.5%	242	0.6%	291	0.7%	195	0.7%	142	0.8%
Non-PPB Initiated Stops	23	0.0%	49	0.1%	63	0.1%	122	0.3%	18	0.0%	7	0.0%	0	0.0%
Canceled Stops	7,671	9.9%	7,946	10.4%	10,024	15.8%	8,123	20.3%	6,714	16.9%	4,518	16.6%	2,928	16.5%
Total	**77,109**	**100%**	**76,409**	**100%**	**63,586**	**100%**	**39,961**	**100%**	**39,760**	**100%**	**27,190**	**100%**	**17,799**	**100%**

In June 2015, PPB made upgrades to the SDC which inadvertently impacted the use of a desktop computer to complete the form. This created an incomplete set of stop records, mainly from Traffic Division officers, between July and December 2015. Therefore, two separate databases were used to extract data from 2015. The SDC system was used to retrieve data conducted by all Non-Traffic units for January 2015 through December 2015 and stops conducted by Traffic Officers from January 2015 through June 2015. The eCite system was used to retrieve missing data on stop location and stop demographics for the second-half of 2015; however, the eCite system does not capture data on stop reasons, searches, search outcomes, and stop disposition at all or in a way that can be translated to the SDC format. These stops were excluded from post-stop statistical analyses, including stop reasons, search rates, hit rates, and stop outcomes.

Table 20. About 90 percent of interactions in the new Stops app were analyzed as completed stops.

	2018		2019		2020		2021	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Completed Stops	15,177	90.2%	34,166	90.8%	25,232	89.9%	14,075	86.8%
Passenger Stops	81	0.5%	184	0.5%	130	0.5%	114	0.7%
Non-PPB Initiated Stops	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Canceled Stops	1,561	9.3%	3,260	8.7%	2,719	9.7%	2,028	12.5%
Total	**16,819**	**100%**	**37,610**	**100%**	**28,081**	**100%**	**16,217**	**100%**

From the launch of the new Stops application on June 27, 2018, PPB personnel completed 98,727 masks

related to the contact of a community member. Prior to launch of the new Stops application, additional training was delivered to officers to reduce the number of interactions incorrectly classified as Stops. Additionally, the application was reconfigured to only trigger stops initiated by PPB personnel. To date, the number of masks representing a completed driver or pedestrian stop (89.8%) is higher than the SDC system, with fewer interactions classified as a canceled stop (9.7%).

Data Considerations

The race / ethnicity questions on the Stops mask are based on officer perceptions of the stopped individual. As with any perception-based field, there is an inherent amount of variance that is expected and creates a nominal degree of error among racial counts and proportions. Community members have also identified the potential for misclassification based on officer experience and perceptions, such as Native Americans / Alaskan Natives being misclassified as Hispanic or Asian. Finally, there is no uniformity of racial classification options between different PPB systems and databases, leading to potential confusion on the part of PPB officers on how to classify community members. These potential data inconsistencies may artificially inflate the proportion of some racial groups while underestimating for others. To date, the PPB has been unable to identify a way to confirm the race of the stopped individual without asking potentially invasive questions at the time of the stop.

State-mandated changes to stops data collection variables complicate comparisons to prior years. For perceived gender questions, Non-Binary (X) was added as an option while the Unknown category was removed. Two new race/ethnicity categories were also added: Middle Eastern and Native Hawaiian or Other Pacific Islander while the Other and Unknown categories were removed. The changes to the perceived race category add additional analysis complications as the Middle Eastern category does not align with existing U.S. Census definitions and the State provided no guidance on how officers should meaningfully distinguish between the different perceived categories. It is impossible to know how the addition and removal of categories affected the classification of subjects into the racial / ethnic groups and gender categories that didn't change. Due to these modifications, any analysis of year-to-year trends should be approached with caution until the new stops application has been in place for at least three full years.

Analysis Methodology

A variety of descriptive and inferential statistical analysis methodologies were used to investigate the changes of stops over time and potential racial and ethnic disparities throughout stop interactions. All omnibus or overall statistical analyses utilized a standard significance level of .05 to describe trends. The large number of stops initiated by PPB officers in the last five years, even though the overall trend is downward, makes any statistical analysis highly sensitive to even small differences or trends, potentially overinflating the meaningfulness of the change. The converse problem happens with pedestrian stops, as the small number of overall stops can obscure even meaningful trends. When appropriate, effect size measures are included for all analysis to aid in the interpretation of analyses. All coefficients and effect sizes are included in the footnotes of each page to enhance the transparency of conclusions and aid additional interpretations or analyses.

Simple linear regressions were utilized to describe overall changes over time in stop behaviors. In instances where there were no identified stops of a specified race / ethnicity or subcategory, the overall trend was not described.

Several different analyses were conducted to investigate differences in operational division behavior and to identify potential racial and ethnic disparities in stops. Initial differences were investigated with Chi-Square Tests for Independence. On tests utilizing race / ethnicity as a category, Unknown / Other individuals were excluded due to methodological, data collection, and interpretation concerns about the category. In cases where the expected count of most cells in a particular subcategory of classification was less than 5, the entire classification was removed to preserve the power of the analysis. This lead to Native American / Alaskan Native, Native Hawaiian, and Middle Eastern entries to be excluded from most driver analyses and Asian, Hispanic, Native American / Alaskan Native, Native Hawaiian, and Middle Eastern entries to be excluded from most pedestrian analyses. In cases the omnibus test met overall significance, pairwise comparisons were examined with a Bonferroni correction to tease out specific differences. If the omnibus level was non-significant, additional analyses were not conducted.

The second analysis conducted to examine potential racial and ethnic disparities in stops and searches is an odds ratio, or Disparity Index. Stop rates for each racial / ethnic group were compared to their population benchmark (see Tables 1 and 2) to determine relative over- or under-representation in stop demographics. For search rates, stop rates for each racial group were used as the comparison benchmark. A Disparity Index value of greater than 1.0 indicates general over-representation while a value of less than 1.0 indicates general under-representation in the group; however, values between 0.75 and 1.5 are considered "benign" due to general error rates in data collection and analysis. Based on prior Bureau practices and research best practices, we focused on values above 2.0 as significant over-representation and values below 0.5 as significant under-representation. Disparity analyses were only conducted when the corresponding Chi-Square Test and pairwise comparisons revealed significant differences.

A series of binary logistic regressions were also performed to determine what factors, including perceived race / ethnicity, may significantly contribute to stop outcomes. Three separate simplified outcomes were analyzed: enforcement action (defined as receiving a warning or citation) vs. no enforcement action, citation vs. warning, and arrest (including cite-in-lieus and juvenile summons vs. non-arrest. The main effects of race, stop reason, and search results were the primary hypothesized predictors, however all possible two-way and three-way interaction effects were also included in the model as co-variates to increase the overall power of the analysis. Individual predictors for stop outcome were only considered when the overall model was statistically significant.

Results Limitations

All analyses and statistical tests were selected to help identify differences and disparities between racial and ethnic groups in driver and pedestrian stops; however, they should not be used as definitive proof of police bias, or lack thereof. The analyses do not account for all legitimate factors that may influence the reason for a stop, search, or disposition of the event, including the circumstances that led to the stop, the location of the stop, and severity of the offense. Additionally, data collection challenges could obscure the reality of interactions with community members and is not capturing all actions associated with a stop. The Portland Police Bureau is committed to improving our analysis and data collection methodologies to accurately assess and understand how bias may or may not affect stops.

APPENDIX D: BENCHMARKING DISCUSSION

A fundamental component of any analysis that seeks to determine the relationship between the perceived race and ethnicity of a driver and stopping and searching behavior by police is to understand how those stopped may or may not differ from those in the community. This comparison group, or "benchmark", should reasonably describe the population that could be contacted, assuming no bias. A benchmark's value depends on the extent to which it can help explain alternative reasons why stop rates might be different among different groups of people, including driving frequency, driving quality, and the location of driving[102]. Academic researchers have developed and utilized different types of benchmarks for use in various situations and jurisdictions, balancing the availability of data with the strengths and limitations of each method[103]. Subject matter experts emphasize that there is no perfect benchmark and recommend using a variety of methods to assess the role that bias may play in police-initiated stops[104].

Population counts and estimates from the United State Census Bureau are routinely used as benchmarks for police stops as the data is inexpensive, quick to obtain, and readily available[105]. However, Census data is not a research-supported best practice due to several known limitations that are difficult to overcome, including the age, accuracy, and relevancy of the data. These limitations are described in more detail below.

CENSUS LIMITATION #1: AGE AND ACCURACY OF DATA

The decennial census conducted throughout the United States of America is usually a huge undertaking; however, the 2020 edition was exceptionally so thanks to the COVID-19 pandemic. The bureau was required to adjust its' data collection strategies and schedules in response to the global pandemic[106], which created additional error when following up households that didn't respond to the Census[107]. Ultimately, these challenges also resulted in a higher non-response rate[108] than 2010[109] for the entire nation and the State of Oregon. Concerningly, BIPOC individuals –

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[102] Fridell, L.A. (2005). *Understanding race data from vehicle stops: A stakeholder's guide*. Washington, DC: Police Executive Research Forum.
[103] Renauer, B.C., Henning, K., & Covelli, E. (2009). *Benchmarking Portland Police Bureau traffic stop and search data: Technical assistance report*. Portland, Ore.: Criminal Justice Policy Research Institute.
[104] Engel, R.S. & Calnon, J.M. (2004). Comparing benchmark methodologies for police-citizen contacts: Traffic stop data collection for the Pennsylvania State Police. *Police Quarterly, 7,* 97 – 125.
[105] Ridgeway, G. & MacDonald, J. (2010). Methods for assessing racially biased policing. In S. Rice & M. White (Eds.), *2010, Race, ethnicity, and policing: New and essential readings* (pp. 180-204). New York: New York University Press.
[106] U.S. Census Bureau. (2022, March 28). 2020 Census Operation Adjustments Due to COVID-19. Retrieved from https://www.census.gov/programs-surveys/decennial-census/decade/2020/planning-management/operational-adjustments.html.
[107] Kennel, T. (2021, March 18). *2020 Post-Enumeration Survey update* [Comittee presentation]. Census Scientific Advisory Committee, Washington, DC.
[108] Bentley, M. (2021, August 18). 2020 Census operational quality metrics: Sub-state summaries. Retrieved from https://www.census.gov/newsroom/blogs/random-samplings/2021/08/2020-census-operational-quality-metrics.html
[109] U.S. Census Bureau. (2021, October 8). 2010 Census Participation Rates. Retrieved from https://www.census.gov/data/datasets/2010/dec/2010-participation-rates.html
(footnote continued)

specifically, Black or African-American individuals and Hispanic or Latino individuals - were significantly undercounted in the 2020 Census[110]. This is a recurring problem for population research estimates produced by the U.S. Census Bureau, as Hispanics, Black or African Americans, and Asians routinely have significantly worse response rates for the Census[111] and American Community Survey[112].

Table 21. City of Portland Race by Police Precinct, 2020

	Citywide		Central Precinct		East Precinct		North Precinct	
Race	Count	Percent	Count	Percent	Count	Percent	Count	Percent
American Indian and Alaska Native	5,167	0.8%	860	0.4%	2,516	1.0%	1,791	0.9%
Asian	56,324	8.6%	15,286	7.3%	30,261	12.4%	10,777	5.4%
Black or African American	37,667	5.8%	6,013	2.9%	12,621	5.2%	19,033	9.6%
Native Hawaiian and Other Pacific Islander	4,026	0.6%	459	0.2%	2,542	1.0%	1,025	0.5%
Other	14,356	2.2%	3,449	1.6%	6,874	2.8%	4,033	2.0%
Two or More	41,120	6.3%	12,390	5.9%	15,145	6.2%	13,585	6.9%
White	493,300	75.7%	172,030	81.7%	173,300	71.2%	147,970	74.7%

Table 22. City of Portland Ethnicity by Police Precinct, 2020

	Citywide		Central Precinct		East Precinct		North Precinct	
Ethnicity	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Hispanic or Latino	63,624	9.8%	14,756	7.0%	29,901	12.3%	18,967	9.6%
Not Hispanic or Latino	588,336	90.2%	195,731	93.0%	213,358	87.7%	179,247	90.4%

The 2020 Census also presents unique data understanding and utility challenges that were not present in prior versions. The Census Bureau reported that in 2020, the nation was the most racially and ethnically diverse than it has ever been before, with individuals identifying as White alone decreasing to a record low[113]. This is partly attributable to natural changes in demographics, however it can be primarily attributed to survey design changes – and the subsequent analysis of these questions – enacted by the Census Bureau[114]. The largest change in the questionnaire added a open-ended box directly below all racial categories – including White – which asked people to state their "origin." Census Bureau staff are then manually coding that write-in as a separate race or ethnicity if it matches those definitions, increasing the number of respondents who are identified as having more than one racial identification[115]. This change makes it nearly impossible for independent

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[110] Kubba, S., Heim, K., & Hong, J. (2022). *National census coverage estimates for people in the United States by demographic characteristics: 2020 Post-Enumeration Survey estimation report,* (PES 20-G-01). Washington, DC: U.S. Census Bureau.

[111] Mule, T. (2012). *Census coverage measurement estimation report: Summary of estimates of coverage for persons in the United States,* (DSSD 2010 Census Coverage Measurement Memorandum Series #2010-G-01). Washington, DC: U.S. Census Bureau, Decennial Statistical Studies Division.

[112] Griffin, D.H. (2002). *Measuring survey nonresponse by race and ethnicity,* (Working Paper). Washington, DC: U.S. Census Bureau.

[113] Jensen, E., Jones, N., Rabe, M., Pratt, B., Medina, L., Orozco, K., & Spell, L. (2021, August 12). The chance that two people chosen at random are of difference race or ethnicity groups has increased since 2020. Retrieved from https://www.census.gov/library/stories/2021/08/2020-united-states-population-more-racially-ethnically-diverse-than-2010.html.

[114] Jones, N., Marks, R., Ramirez, R., & Rios-Vargas, M. (2021, August 12). 2020 Census illustrates racial and ethnic composition of the country. Retrieved from https://www.census.gov/library/stories/2021/08/improved-race-ethnicity-measures-reveal-united-states-population-much-more-multiracial.html

[115] Schuster, L. (2021, December 13). We're reporting census data all wrong. Retrieved from https://www.bostonindicators.org/article-pages/2021/december/census_reporting.

(footnote continued)

researchers to compare 2020 Census results to prior years or alternative data sources, such as a records management system or third-party perception ratings of race and ethnicity.

Additionally, in many ways – the 2020 Census is already out-of-date. The entire Portland metropolitan region grew by about 1.1% in 2021[116], almost entirely due to people migrating to the city from other areas of the state and county[117]. Migration is also increasing diversity across Oregon[118] and that is especially true within Multnomah County[119]. Over the last 10 years[120], all race / ethnic groups except for American Indian or Alaskan Natives have grown at a faster rate than White individuals. In fact, the number of White individuals residing in Multnomah County barely grew since 2010[121], adding only a total of 3,701 individuals. This is vastly different than the Census Bureau estimated prior to 2020, and highlights the general problem with estimates of the resident population between decennial censuses. Analyses indicate that the average error rate for the overall population for counties similar to Multnomah County (in size and growth) is ± 1.61% - the best performing estimate for the Census Bureau[122]. The American Community Survey – the only other Census product that produces race/ethnicity demographic estimates for local jurisdictions was rated as the least accurate, with overall margin of error ranging from ± 4.72% for five-year estimates to ± 5.21% for one-year estimates. A literature review did not yield any research on the estimation accuracy of county subpopulations, including race and ethnicity, for Census Bureau products; however, general statistical methodology dictates that higher margin of errors should exist for Hispanic, Black or African American, Asian or other non-White populations in the area due to their smaller frequency in the population.

Table 23. Multnomah County Population, 2010 - 2020

	2010 Census		2020 Census		Growth
Race / Ethnicity	Count	Percent	Count	Percent	Rate
American Indian and Alaska Native	5,576	0.8%	5,455	0.7%	- 2.2%
Asian	47,844	6.5%	61,280	7.5%	+ 28.1%
Black or African American	40,167	5.5%	43,793	5.4%	+ 9.0%
Hispanic or Latino	80,138	10.9%	103,753	12.7%	+ 29.5%
Native Hawaiian and Other Pacific Islander	3,976	0.5%	5,251	0.6%	+ 32.1%
Other	1,520	0.2%	4,885	0.6%	+ 221.4%
Two or More	25,711	3.5%	55,388	6.8%	+ 115.4%
White	531,922	72.2%	535,623	65.7%	+ 0.7%

[116] Population Research Center. (2022, April 19). 2021 Annual Population Report Tables. Population Research Center, Portland State University. Retrieved from https://www.pdx.edu/population-research/population-estimate-reports

[117] Lehner, J. (2021, November 23). No pandemic migration boom in Oregon. Retrieved from https://oregoneconomicanalysis.com/2021/11/23/there-was-no-pandemic-migration-boom/.

[118] Lehner, J. (2019, January 8). Migration diversifies Oregon, barely. Retrieved from https://oregoneconomicanalysis.com/2019/01/08/migration-diversifies-oregon-barely/

[119] County is the smallest geographic area in which the U.S. Census Bureau produces annual population estimates and is a good proxy for general population trends. The City of Portland represents about 79 percent of the County's population and about 31 percent of the County's land area. 2021 population estimates are scheduled to be released in June 2022.

[120] U.S. Census Bureau. (2021). 2020 Decennial Census. Table P2: Hispanic or Latino, and not Hispanic or Latino by Race. U.S. Census Bureau.

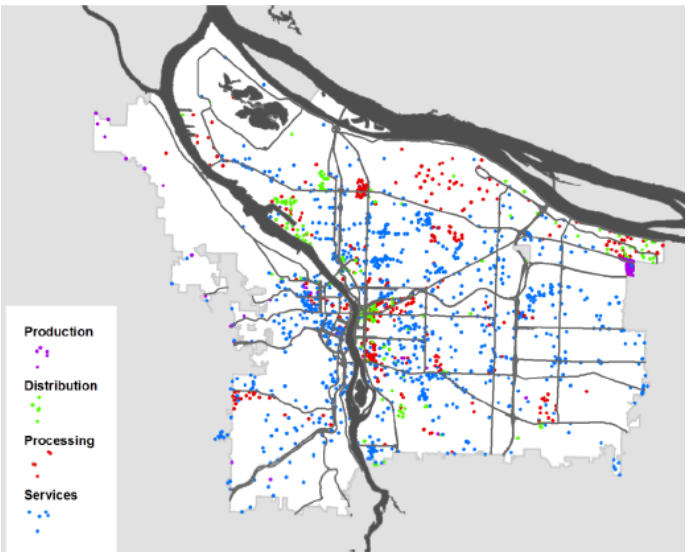
[121] U.S. Census Bureau. (2011). 2010 Decennial Census. Table P2: Hispanic or Latino, and not Hispanic or Latino by Race. U.S. Census Bureau.

[122] Yowell, T. & Devine, J. (2013). *Evaluating current and alternative methods to produce 2010 county population estimates*, (U.S. Census Bureau Working Paper No. 100). Washington, DC: U.S. Census Bureau Population Division.

CENSUS LIMITATION #2: ONLY INCLUDES RESIDENT POPULATION

Census products, including the decennial census, population estimates, and the American Community Survey, are explicitly focused on the residential population in the observed jurisdictions. However, Portland residents are not the only population subjected to traffic stops, as the rules of the road apply equally to all road users, including visitors and commuters, regardless of their residency. As the economic center for the region, about 276,000 commuters enter Portland daily[123], swelling the daily commuter-adjusted population estimate[124] to about 920,000 prior to the pandemic. Most commuters (61.8%) report operating a car or motorcycle to drive alone to work[125], adding 304,000 motor vehicles to the road per day (excluding carpoolers). In addition to commuters, the region is a vibrant tourist destination, as a total of 8.82 million people had an overnight trip in the area in 2019 and stayed an average of 4.2 nights[126], boosting the daily population by another 74,000 individuals. About 85 percent of visitors reported operating a motor vehicle – including a personal vehicle or rental car – during their visit, further increasing the number of individuals on Portland roadways[127].

Figure 11. Food employment density in the City of Portland (Green, Schrock, & Liu, 2012)



Commuters and tourists are not the only groups that add to Portland's population, as a vibrant entertainment scene invites temporary visitors from neighboring jurisdictions. The City of Portland has more food service employees per capita than any other city in the region with large numbers of restaurants in the Downtown core and along transportation routes[128]. These food services, along with nightlife venues, festivals, and other entertainment options, are destinations for locals and

[123] U.S. Census Bureau. (2021). LEHD Origin-Destination Employment Statistics Data (2002 – 2019). U.S. Census Bureau, Longitudinal-Employer Household Dynamics Program.
[124] Total Resident Population + Total Workers Working In Area – Total Workers Living in Area. Equation retrieved from https://www.census.gov/topics/employment/commuting/guidance/calculations.html
[125] U.S. Census Bureau. (2022). 2016 – 2020 American Community Survey 5-Year Estimates. Table B08601: Means of Transportation to Work for Workplace Geography. U.S. Census Bureau, American Community Survey.
[126] Dean Runyan Associates. (2020). *Oregon Travel Impacts: Statewide Estimates, 1992 – 2019p.* Portland, Ore: Oregon Tourism Commission. Retrieved from https://industry.traveloregon.com/resources/research/oregon-travel-impacts-1991-2018-dean-runyan-associates/
[127] Longwoods International (2018). *Oregon 2017 Regional Visitor Report: Portland Region.* http://industry.traveloregon.com/research/archive/portland-region-overnight-travel-study-2017-longwoods-international/
[128] Green, J., Schrock, G., & Liu, J. (2015). *Portland's Food Economy: Trends and Contributions.* Portland, Ore: City of Portland Bureau of Planning and Sustainability. Retrieved from https://www.portlandoregon.gov/bps/article/548390
(footnote continued)

non-locals alike, increasing the number of road users on nights and weekends. The demographics of neighboring municipalities closely resemble Portland's demographics, with White as the largest group in every jurisdiction[129]. Data from the 2020 U.S. Census indicates that most Portland suburbs have a higher Hispanic or Latino population and smaller Black or African-American population than Portland as a whole. Most transit usage occurs during the peak hours of 7 a.m. to 9 a.m. and 4 p.m. to 6 p.m. on weekdays[130], indicating that most people temporarily visiting Portland for entertainment purposes are likely driving or carpooling to the locale.

Table 24. Racial and Ethnic Demographics of Neighboring Jurisdictions from the 2020 U.S. Census

	Vancouver		Gresham		Beaverton		Tigard		Lake Oswego	
Race / Ethnicity	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
American Indian and Alaska Native	3,309	1.7%	878	0.8%	334	0.3%	196	0.4%	71	0.2%
Asian	10,198	5.3%	6,791	5.9%	11,724	12.0%	4,822	8.8%	3,340	8.2%
Black or African American	5,914	3.1%	5,665	5.0%	2,669	2.7%	1,080	2.0%	310	0.8%
Hispanic or Latino	30,541	15.8%	24,043	21.0%	17,677	18.1%	7,442	13.6%	2,145	5.3%
Native Hawaiian and Other Pacific Islander	3,309	1.7%	1,213	1.1%	503	0.5%	537	1.0%	57	0.1%
Other	959	0.5%	559	0.5%	518	0.5%	278	0.5%	212	0.5%
Two or More	12,603	6.5%	7,001	6.1%	6,532	6.7%	3,485	6.4%	2,482	6.1%
White	126,109	65.4%	68,097	59.6%	57,537	59.0%	36,699	67.3%	32,114	78.8%

The dramatic changes in the city's population each day makes it especially difficult to understand the demographics of who may be utilizing the City's public roadways. Portland ranks in the bottom half of all large cities nationwide in Black or African American employment – but in the upper half for White, Hispanic, and Asian employment[131] – highlighting the racial disparities that exist in the City. Black or African American individuals that live in Portland have the lowest labor force participation rate for any racial group, whereas Hispanic or Latinos (of any race) have the highest in the City[132]. Nationally, White individuals (17.0%) are more likely to be employed part-time than Black or African American individuals (15.1%)[133], which means that group may be more likely to commute outside of the traditional "rush hours", further complicating any benchmark of who may be using the public roadways at any particular hour.

The differential commute patterns for individuals that either live, work, or visit Portland further complicate efforts to benchmark Stops data. White individuals that live (55.6%)[134] in Portland are

[129] U.S. Census Bureau. (2021). 2020 Decennial Census. Table P2: Hispanic or Latino, and not Hispanic or Latino by Race. U.S. Census Bureau.
[130] TriMet Code 19.05(A)(D)
[131] Ross, M. & Holmes, N. (2017, Feb. 27). Employment by race and place: Snapshots of America. Retrieved from https://www.brookings.edu/blog/the-avenue/2017/02/27/employment-by-race-and-place-snapshots-of-america/
[132] U.S. Census Bureau. (2022). 2016 – 2020 American Community Survey 5-Year Estimates. Table S2301: Employment Status. U.S. Census Bureau, American Community Survey.
[133] Bureau of Labor Statistics, US Department of Labor (2020). Household data: Annual averages: 12. Employed persons by sex, occupation, class of worker, full- or part-time status, and race. Bureau of Labor Statistics, Current Population Survey. Retrieved from https://www.bls.gov/cps/cpsaat12.htm
[134] U.S. Census Bureau. (2022). 2016 – 2020 American Community Survey 5-Year Estimates. Table B08105H: Means of Transportation to Work (White Alone, Not Hispanic or Latino). U.S. Census Bureau, American Community Survey.
(footnote continued)

about as likely to drive alone to work than Black individuals (56.5%)[135], however White individuals that work in the City (62.6%)[136] are more likely to drive along than Black individuals (58.1%)[137]. Black individuals more likely to utilize shared transportation methods such as mass transit (16.7%, 16.0%)[133,135] than White individuals (10.6%, 10.3%)[132,134]. These differences in commute methods, combined with the variation in employment levels, likely means there are more cars on the road operated by White individuals than Black individuals, especially during business hours. Racial and ethnic demographics also vary substantially for tourists and visitors – who primarily drive – to the area, as the majority of visitors identify themselves as White (83%) with only 3 percent self-identifying as African-American[138].

By only focusing on the resident population of Portland – which the U.S. Census does – it excludes a significant portion of people that could be using the City's roadways. Employment and commute pattern demographics indicate that is reasonable to expect an increase in the number of White individuals on Portland roadways. However, much of this growth is primarily during the standard work week. Black or African American individuals are more likely to be unemployed or work part-time, making their roadway usage unpredictable by traditional measures. Available statistics also don't highlight where certain demographics may be driving, as the purpose of your trip may influence where and when you use City roadways.

CENSUS LIMITATION #3: DOES NOT ACCOUNT FOR DIFFERENTIAL EXPOSURE

The readily available data from the U.S. Census fails to accurately identify the demographic breakdown of who might be using the City's public roadways in 2019. However, even if it sufficiently described the entire driving population, it would still fail to account for the reality that not all drivers are equally likely to be stopped by police. As described by Tillyer, Engel, and Cherkauskas (2009)[139], the best benchmarks "reflect the drivers' *risk* of being stopped, assuming no bias" on the part of police. There are numerous legitimate and legal reasons why an individual would have the potential for differential exposure to law enforcement officers, and the best benchmarks attempt to account for those.

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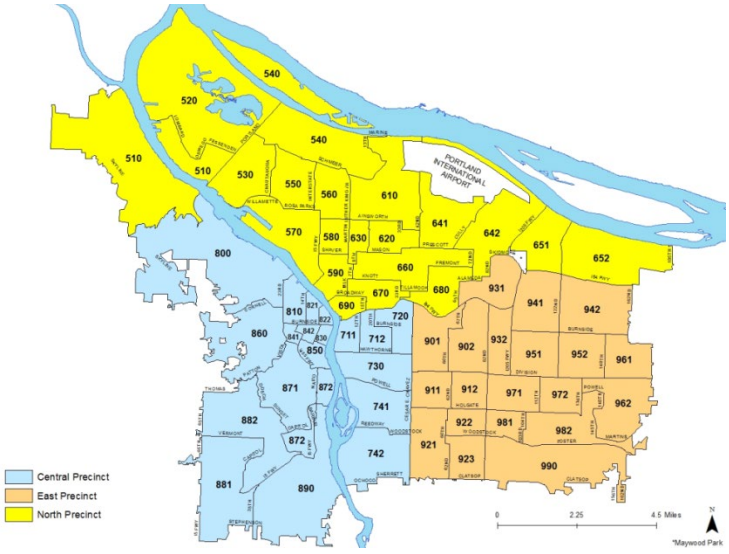
[135] U.S. Census Bureau. (2022). 2016 – 2020 American Community Survey 5-Year Estimates. Table B08105B: Means of Transportation to Work (Black or African American Alone). U.S. Census Bureau, American Community Survey.
[136] U.S. Census Bureau. (2022). 2016 – 2020 American Community Survey 5-Year Estimates. Table B08505H: Means of Transportation to Work for Workplace Geography (White Alone, Not Hispanic or Latino). U.S. Census Bureau, American Community Survey.
[137] U.S. Census Bureau. (2022). 2016 – 2020 American Community Survey 5-Year Estimates. Table B08505B: Means of Transportation to Work for Workplace Geography (Black or African American Alone). U.S. Census Bureau, American Community Survey.
[138] Longwoods International (2018). *Oregon 2017 Regional Visitor Report: Portland Region.* http://industry.traveloregon.com/research/archive/portland-region-overnight-travel-study-2017-longwoods-international/
[139] Tillyer, R., Engel, R.S., & Cherkauskas, J.C. (2009). Best practices in vehicle stop data collection and analysis. *Policing: An International Journal of Police Strategies & Management, 33*, 69 – 92.

The area in which the subject is driving is a significant factor in how likely an individual is to be contacted by police. The City of Portland is divided into 3 different administrative areas, called precincts, which form the basis of police patrol activity. Each precinct is further divided into 20 subunits, called patrol districts, that were sized and balanced in 2009 to account for variations in 9-1-1 calls and other calls for police service. The relative size of the district impacts whether a person is more or less likely to encounter an officer on patrol – for instance, driving in District 822 in the Old Town / Chinatown area of Portland (with 7.9 miles of roadways) a subject is more likely to encounter an officer on patrol than in District 882 in Southwest Portland (with 89.4 miles of roadways).

Figure 12. Portland Precincts and Patrol Districts



However, due to staffing shortages across the Bureau, not every precinct and district is staffed evenly; in 2021, not a single precinct had a staffing minimum of 20 officers for every shift[140] to ensure each patrol district had at least one officer assigned for all hours of the day. Multiple officers may also be assigned to the same unit, further reducing the overall coverage within a precinct. Without a full complement of officers available, staffing supervisors prioritize district assignment and special patrols based, in part, on reducing violent crime and responding to calls for service, including 9-1-1 calls, from community members. Where an officer patrols can also have significant impact on their policing strategy and discretionary activity, as officers are more likely to take reports and make arrests in areas that are perceived to be high crime, even for more minor offenses that may be handled less formally in other areas of the jurisdiction[141].

The intersection between the common patrol areas for Portland police officers and where a subject lives, works, visits, or transits through is a key component of understanding a subject's risk of being stopped when engaging in dangerous or other illegal driving behaviors. About 66 percent of Portland's population self-identified as "White" on the 2020 U.S. Census; however, this does not mean that ratio is true for every neighborhood in the City. Traditional measures of segregation show that Portland is relatively well-integrated, ranking in the top 25% for the largest metro areas[142] and

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[140] Central and North Precincts had 3 shifts: A-Shift (Day) from 7 a.m. to 5 p.m.; C-Shift (Afternoon) from 4 p.m. to 2 a.m.; E-Shift (Night) from 10 p.m. to 8 a.m. Each had an additional shift, B-Shift, scheduled from 12 p.m. to 12 a.m.

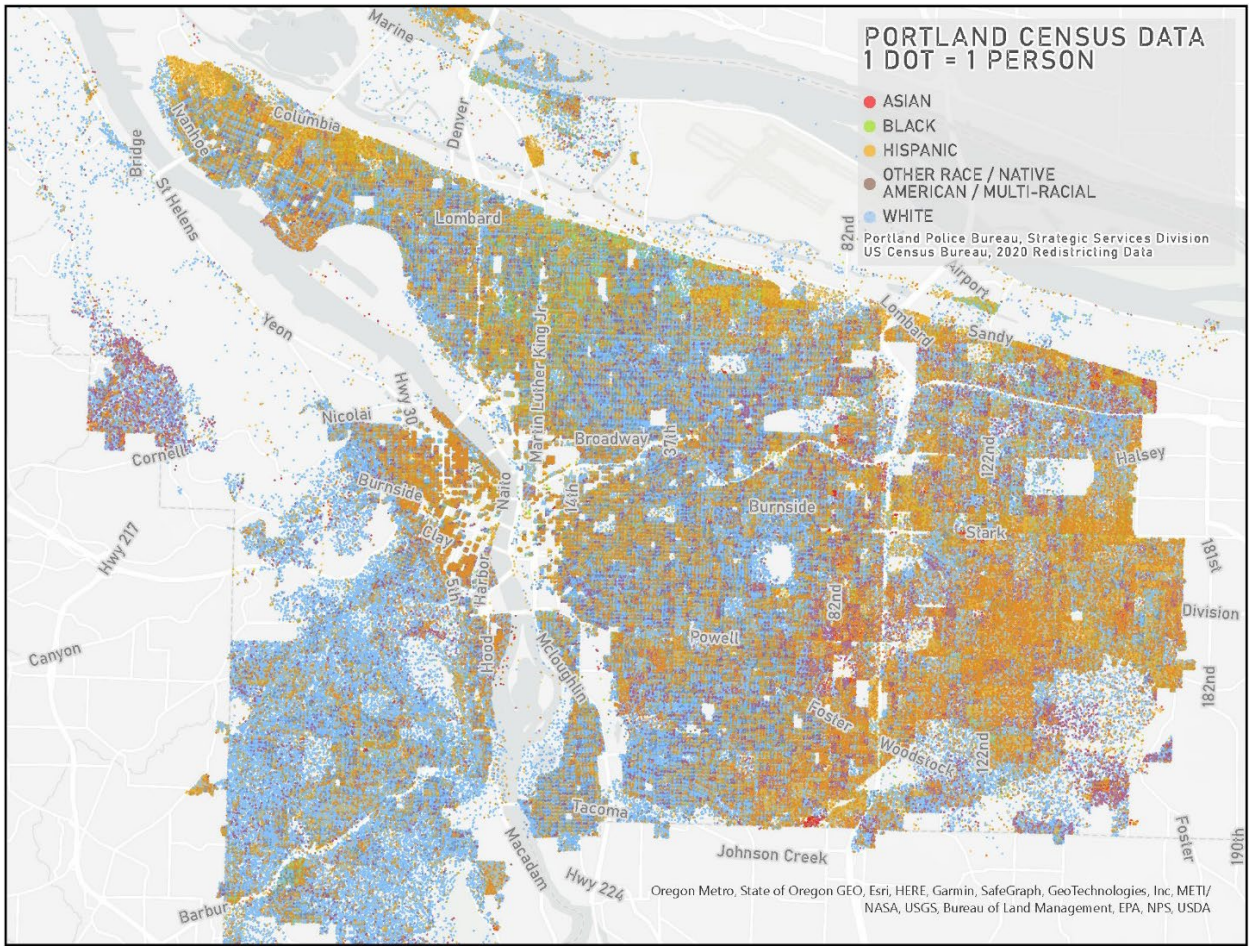
[141] Lum, C. (2009). *Does the "race of places" influence police officer decision making?,* Final report, W.E.B. DuBois Fellowship (Award #2007-IF-CX-0032), National Institute of Justice. Washington, DC: U.S. National Institute of Justice. Retrieved from https://www.ncjrs.gov/pdffiles1/nij/grants/231931.pdf

[142] Michigan Population Studies Center, Institute for Social Research, University of Michigan. (n.d.). New racial segregation measures for large metropolitan areas: Analysis of the 1990-2010 decennial censuses. Retrieved from https://www.psc.isr.umich.edu/dis/census/segregation2010.html

(footnote continued)

cities[143]. However, this is partly due to methodological challenges, as the city's overall lack of racial diversity limits the usefulness of these measures for Portland. Graphical analyses of Portland racial demographics (see Figure 13) show that Black, Hispanic, and Asian populations cluster in distinct pockets around the City – but these are small enough that a Census tract-based analysis would have difficultly differentiating.

Figure 13. Spatial representation of Portland racial demographics, 2020 US Census



Comparing the residences of Portland's population with the top locations for 9-1-1 calls and violent crime helps explain the differential exposure to law enforcement in Portland across different racial groups. East Precinct – especially along NE/SE 82nd Avenue, NE/SE 122nd Avenue, and SE Division Street – receive large proportions of the calls for service and violent crime in the City. These areas also coincide with some of the least-White portions of Portland, increasing the likelihood that Hispanic- and Asian-identifying Portlanders encounter a law enforcement officer in the area. Inner Northeast and North Portland also see elevated levels of crime and activity, increasing the likelihood that Black-identifying Portlanders may be contacted by Portland police officers doing patrol work. Conversely, the neighborhoods with the highest proportion of White residents – namely Southwest Portland, the Sellwood-Westmoreland/Eastmoreland neighborhoods in Southeast, and Alameda/Beaumont-Wilshire neighborhoods in Northeast have some of the

[143] Silver, N. (2015, May 1). The most diverse cities are often the most segregated. Retrieved from https://fivethirtyeight.com/features/the-most-diverse-cities-are-often-the-most-segregated/

lowest activity in the City, decreasing the likelihood that residents of those areas would encounter a Portland police officer in their neighborhood.

The analysis also highlights the drawback of using U.S. Census residential data to benchmark traffic stops and police activity. Portland's city center – namely Downtown, Old Town/Chinatown, the Pearl District, Central Eastside Industrial District, and the Lloyd District – are the most active spots in Portland for reported violent crimes and calls for service. However, large portions of these areas were reported to have no official residents as they are primarily places of commerce and business. These areas also have the largest population of houseless and unsheltered populations in the City, which are notoriously hard to locate and count for the decennial censuses[144]. This is especially relevant given that people that identified as American Indian or Alaskan Native, Native Hawaiian or Pacific Islander, and Black or African American are over-represented in City homelessness rates[145]. Unsheltered people of color disproportionately reported sleeping in the Downtown area compared to other areas in town, further increasing their risk of being contacted by law enforcement officials in the busiest part of town.

The rapid growth and change in Portland's neighborhoods is also likely increasing the risk certain communities face in encountering a police officer while driving. Portland has one of the highest rates of gentrification and displacement in the county[146] with the displacement most prominently affecting traditionally Black communities in North and Northeast Portland[147]. Even though residents are being displaced, it does not necessarily mean their whole community has moved – displaced residents are still traveling to their former communities to shop, worship, work, and visit friends/family. Displaced residents are forced to move further from public transportation hubs[148], which can increase the total number of miles based on land use policies and the transportation network[149]. The increased travel time, and miles, that displaced residents of color face increases the likelihood they encounter a Portland police officer on patrol, especially as they commute through high police-activity areas on main arterials.

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144 U.S. Government Accountability Office. (2018, July). *2020 Census: Actions Needed to Address Challenges to Enumerating Hard-to-Count Groups.* (Publication No. GAO-18-599). Retrieved from https://www.gao.gov/assets/700/693450.pdf

145 Joint Office of Homeless Services. (2019). *2019 Point-in-Time Count of Homelessness in Portland/Gresham/Multnomah County, Oregon.* Portland, Ore: Multnomah County. Retrieved from https://multco.us/housing-and-homelessness/point-time-counts

146 Richardson, J., Mitchell, B., & Franco, J. (2019). *Shifting neighborhoods: Gentrification and cultural displacement in American cities.* Washington, DC: National Community Reinvestment Coalition. Retrieved from https://ncrc.org/gentrification/

147 Bureau of Planning and Sustainability, City of Portland. (2018). *2018 gentrification and displacement neighborhood typology assessment: Key findings and methodology report.* Retrieved from https://www.portlandoregon.gov/bps/62635

148 Soursourian, M. (2012). *Community development research brief: Suburbanization of poverty in the Bay Area.* San Francisco: Federal Reserve Bank of San Francisco. Retrieved from https://www.frbsf.org/community-development/files/Suburbanization-of-Poverty-in-the-Bay-Area2.pdf

149 Chatman, D.G., Xu, R., Park, J. & Spevack, A. (2017). Chapter 4: The effects on auto use of household displacement from rail station areas. In K. Chapple, P. Waddell, D. Chatman, A. Loukaitou-Sideris, & P. Ong. *Developing a new methodology for analyzing potential displacement* (pp. 156 – 180). Berkeley, Calif.: University of California, Berkeley.

APPENDIX E: PERCEIVED GENDER ANALYSIS

The Portland Police Bureau collects data on the officer's perception of the race, gender, and age of all stopped drivers and pedestrians. Male subjects were the most stopped group across all stop types, representing 70.9% of all stops. Non-Traffic officers were significantly more likely to stop non-binary and male drivers[150]. Stop rates for any perceived gender have not changed significantly over the past five years.

Table 25. Non-Traffic officers stopped male and non-binary drivers at a significantly higher rate.

		2017		2018		2019		2020		2021	
	Gender	**Count**	**Percent**	**Count**	**Percent**	**Count**	**Percent**	**Count**	**Percent**	**Count**	**Percent**
Traffic	Female	3,509	32.7%	4,248	32.2%	5,061	34.8%	4,288	31.4%	1,190	31.9%
	Male	7,219	67.3%	8,924	67.7%	9,461	65.1%	9,322	68.3%	2,524	67.8%
	Non-Binary*	--	--	2	0.0%	10	0.1%	30	0.2%	11	0.3%
	Unknown^	6	0.1%	7	0.1%	--	--	--	--	--	--
	Traffic Total	**10,734**	**100%**	**13,181**	**100%**	**14,532**	**100%**	**13,640**	**100%**	**3,725**	**100%**
		2017		**2018**		**2019**		**2020**		**2021**	
	Gender	**Count**	**Percent**	**Count**	**Percent**	**Count**	**Percent**	**Count**	**Percent**	**Count**	**Percent**
Non-Traffic	Female	3,169	27.4%	4,535	28.1%	5,031	27.2%	3,080	27.1%	2,828	27.4%
	Male	8,241	71.4%	11,515	71.3%	13,426	72.6%	8,206	72.3%	7,415	72.0%
	Non-Binary*	--	--	25	0.2%	46	0.2%	65	0.6%	60	0.6%
	Unknown^	137	1.2%	70	0.4%	--	--	--	--	--	--
	Non-Traffic Total	**11,547**	**100%**	**16,145**	**100%**	**18,503**	**100%**	**11,351**	**100%**	**10,303**	**100%**

* Non-Binary was added as an available option on June 27, 2018.

^ Unknown was removed as an available option on June 27, 2018.

Table 26. Male pedestrians have always been stopped at a higher rate than male drivers.

		2017		2018		2019		2020		2021	
	Gender	**Count**	**Percent**	**Count**	**Percent**	**Count**	**Percent**	**Count**	**Percent**	**Count**	**Percent**
Traffic	Female	18	25.7%	16	22.5%	23	23.7%	11	28.9%	0	0.0%
	Male	52	74.3%	54	76.1%	74	76.3%	27	71.1%	4	100.0%
	Non-Binary*	--	--	1	1.4%	0	0.0%	0	0.0%	0	0.0%
	Unknown^	0	0.0%	0	0.0%	--	--	--	--	--	--
	Traffic Total	**70**	**100%**	**71**	**100%**	**97**	**100%**	**38**	**100%**	**4**	**100%**
		2017		**2018**		**2019**		**2020**		**2021**	
	Gender	**Count**	**Percent**	**Count**	**Percent**	**Count**	**Percent**	**Count**	**Percent**	**Count**	**Percent**
Non-Traffic	Female	29	24.4%	65	12.8%	166	16.1%	24	11.8%	6	14.0%
	Male	88	73.9%	441	86.6%	867	83.8%	179	88.2%	36	83.7%
	Non-Binary*	--	--	2	0.4%	1	0.1%	0	0.0%	1	2.3%
	Unknown^	2	1.7%	1	0.2%	--	--	--	--	--	--
	Non-Traffic Total	**119**	**100%**	**509**	**100%**	**1,034**	**100%**	**203**	**100%**	**43**	**100%**

* Non-Binary was added as an available option on June 27, 2018.

^ Unknown was removed as an available option on June 27, 2018.

[150] $x^2 = 30.626, p < .001, df = 2$

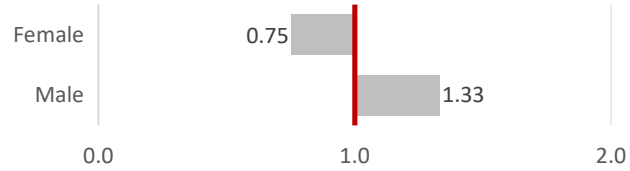
When analyzing stops data for disparities by race, PPB utilizes two different benchmarks that are tailored to the differing mission of Traffic Division and the Non-Traffic divisions. The use of the Crime Victimization benchmark as a proxy for subjects that may be working, living, recreating, or transiting in an area is supported by the literature. However, the literature shows that no single measure explains potential gender differences by geographic location, with age and physical activity[151], economic factors[152], and sexual preference[153] all contributing to locale-based gender differences. Furthermore, women are also more likely to report being victims of violent crimes[154]. Without comprehensive research on how these known and unknown factors contribute to geographic place-making in Portland, it is improper to use crime victimization as a proxy for potential police contact by gender.

Table 27. 2021 Injury Collision Statistics, by Gender of Drivers

	2021	
Gender	**Count**	**Percent**
Female	470	35.0%
Male	871	65.0%
Total	**1,341**	**100.0%**

Instead, the reported gender[155] of drivers involved in injury collisions in 2021 was used as a benchmark for driver stops by all divisions. In the analysis of driver's race, this benchmark is used for stops by Traffic officers only. Based on the reported gender of individuals involved in injury collisions, drivers are stopped similar to expected rates. No comparable benchmark exists for pedestrian stops, so no analysis was conducted.

Figure 14. Drivers are stopped at rates similar to the 2021 Injury Collision Benchmark



Stop Reasons

Non-Traffic officers[156] and Traffic officers[157] display significantly different stop patterns based on the perceived gender of the driver. Female drivers were more likely to commit a violation for Dangerous Driving Behaviors whereas male drivers were more likely to be stopped for Minor Moving Violations, Non-Moving Violations, and Non-Traffic Offenses. Male drivers were also significantly more likely to be stopped based on the reasonable suspicion / probable cause that they were involved in a Non-Traffic Offense[158] when stopped by Non-Traffic officers.

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[151] Pollard, T.M. & Wagnild, J.M. (2017). Gender differences in walking (for leisure, transport, and in total) across adult life: a systematic review. *BMC Public Health, 17*.
[152] Chetty, R., Hendren, N., Lin, F., Majerovitz, J., & Scuderi, B. (2016). *Childhood environment and gender gaps in adulthood (Working Paper No. 21936)*. Cambridge, MA: National Bureau of Economic Research.
[153] Diehm, J. (2018, June). Men are from Chelsea, Women are from Park Slope: How "gayborhoods" in 15 major American cities are divided by gender. Retrieved from https://pudding.cool/2018/06/gayborhoods/.
[154] Morgan, R.E., & Truman, J.L. (2018). *Criminal Victimization, 2017* (NCJ 252472). Washington, D.C.: Bureau of Justice Statistics, U.S. Department of Justice.
[155] The PPB's records management system, RegJIN, does not include "Non-Binary" as possible gender category so the group cannot be included in any benchmark analyses.
[156] $x^2 = 40.816, p < .001, df = 3$
[157] $x^2 = 24.780, p < .001, df = 2$
[158] $x^2 = 13.226, p < .002, df = 2$

Table 28. Male drivers were significantly more likely to be stopped for a Minor Moving Violation, Non-Moving Violation, or a Non-Traffic Offense than Female drivers.

		Moving Violations				Non-Moving Violations		Non-Traffic Offenses	
		Dangerous		Minor					
	Gender	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Traffic	Female	960	80.7%	208	17.5%	22	1.8%	0	0.0%
	Male	1,846	73.1%	583	23.1%	87	3.4%	8	0.3%
	Non-Binary	7	63.6%	4	36.4%	0	0.0%	0	0.0%
	Total	**2,813**	**75.5%**	**795**	**21.3%**	**109**	**2.9%**	**8**	**0.2%**

		Moving Violations				Non-Moving Violations		Non-Traffic Offenses	
		Dangerous		Minor					
	Gender	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Non-Traffic	Female	1,615	57.1%	280	9.9%	899	31.8%	34	1.2%
	Male	3,727	50.3%	865	11.7%	2,694	36.3%	129	1.7%
	Non-Binary	29	48.3%	11	18.3%	17	28.3%	3	5.0%
	Total	**5,371**	**52.1%**	**1,156**	**11.2%**	**3,610**	**35.0%**	**166**	**1.6%**

Table 29. All perceived gender groups were stopped most often for Non-Traffic Offenses.

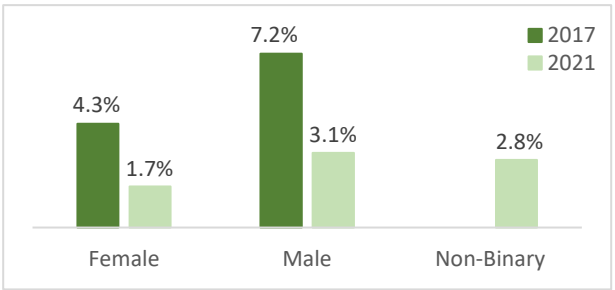
		Moving Violations				Non-Moving Violations		Non-Traffic Offenses	
		Dangerous		Minor					
	Gender	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Traffic	Female	--	--	--	--	--	--	--	--
	Male	2	50.0%	1	25.0%	0	0.0%	1	25.0%
	Non-Binary	--	--	--	--	--	--	--	--
	Total	**2**	**50.0%**	**1**	**25.0%**	**0**	**0.0%**	**1**	**25.0%**

		Moving Violations				Non-Moving Violations		Non-Traffic Offenses	
		Dangerous		Minor					
	Gender	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Non-Traffic	Female	0	0.0%	0	0.0%	0	0.0%	6	100.0%
	Male	6	16.7%	9	25.0%	4	11.1%	17	47.2%
	Non-Binary	0	0.0%	0	0.0%	0	0.0%	1	100.0%
	Total	**6**	**14.0%**	**9**	**20.9%**	**4**	**9.3%**	**24**	**55.8%**

Search Rates by Gender

Search rates, based on perceived gender, have significantly changed over the last five years. Males and females were both searched significantly less than they were five years ago[159]. Male subjects were significantly more likely to asked to consent to a search when compared to female subjects (1.8% vs. 1.1%)[160], however both groups denied the consent search request at similar rates[161]. There were no significant differences in the rates for either Consent[162] or a Warrant Exception[163] searches.

Figure 15. Search rates have slightly declined for all gender groups since 2017.



[159] Female: $p < .02$, $r^2 = .91$; Male: $p < .02$, $r^2 = .91$
[160] $x^2 = 9.385, p < .002, df = 1$
[161] $x^2 = 0.815, p < .37, df = 1$
[162] $x^2 = 0.070, p < .80, df = 1$
[163] $x^2 = 0.407, p < .53, df = 1$

Table 30. Male subjects are significantly more likely to be searched than female subjects.

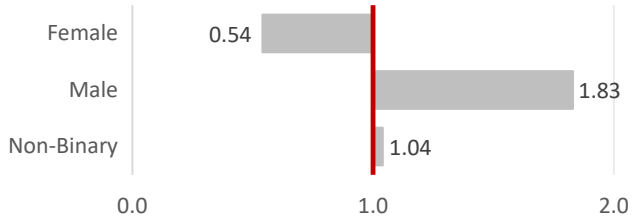
		Total Subjects Searched		Consent		Warrant		Warrant Exception	
	Gender	Searches	Rate	Count	Percent	Count	Percent	Count	Percent
Traffic	Female	5	0.4%	4	80.0%	0	0.0%	4	80.0%
	Male	23	0.9%	4	17.4%	3	13.0%	20	87.0%
	Non-Binary	0	0.0%	--	--	--	--	--	--
	Total	**28**	**0.8%**	**8**	**28.6%**	**3**	**10.7%**	**24**	**85.7%**

		Total Subjects Searched		Consent		Warrant		Warrant Exception	
	Gender	Searches	Rate	Count	Percent	Count	Percent	Count	Percent
Non-Traffic	Female	63	2.2%	30	47.6%	5	7.9%	38	60.3%
	Male	288	3.9%	146	50.7%	13	4.5%	159	55.2%
	Non-Binary	2	3.3%	0	0.0%	0	0.0%	2	100.0%
	Total	**353**	**3.4%**	**176**	**49.9%**	**18**	**5.1%**	**199**	**56.4%**

- NOTE: More than one search type can be utilized and recorded on each interaction

Portland Police officers did not display differential search patterns for stopped subjects based on the subject's perceived gender at a disparate rate in 2021. Male drivers were searched significantly more than female subjects[164] - however it was not a disparate rate when compared to overall stop rates. This is the first year on record without a disparate gender search rate.

Figure 16. Male subjects were not searched at a disparate rate in 2021 – an improvement from prior years



Contraband Hit Rates

Despite being searched more by PPB officers, males were statistically less likely[165] to be found with contraband than females. In 2021, males were found with contraband in 59.5% of searches, while females were found with contraband in 76.5% of searches. Drugs and Firearms were the most commonly found items for male subjects, whereas Alcohol and Other Contraband were most common for female subjects.

Table 31. Illicit drugs are the most commonly uncovered item during subject searches.

	Total Searches	Found Contraband		Alcohol		Drugs		Firearms		Other Weapons		Stolen Property		Other	
Gender	Count	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Female	68	52	76.5%	22	32.4%	15	22.1%	5	7.4%	4	5.9%	7	10.3%	19	27.9%
Male	311	185	59.5%	41	13.2%	71	22.8%	53	17.0%	20	6.4%	15	4.8%	40	12.9%
Non-Binary	2	2	100.0%	0	0.0%	0	0.0%	0	0.0%	1	50.0%	0	0.0%	1	50.0%
Total	**381**	**239**	**62.7%**	**63**	**16.5%**	**86**	**22.6%**	**58**	**15.2%**	**25**	**6.6%**	**22**	**5.8%**	**60**	**15.7%**

[164] $x^2 = 22.164, p < .001, df = 2$
[165] $x^2 = 6.871, p < .01, df = 1$
(footnote continued)

Stop Outcomes

Male and female subjects had significantly different stop dispositions when stopped by a Portland Police Bureau officer from either division[166]. Male subjects were significantly more likely to be arrested than female subjects from either division, while female subjects were significantly more likely to receive a citation. Male subjects stopped by Non-Traffic officers were significantly more likely to be released with no enforcement action, while the same was true for female subjects stopped by Traffic personnel. Male subjects stopped by Traffic officers were also more likely to receive a warning. The progressive nature of a stop, and the multiple decision points within the interaction, make it difficult to discern what role, if any, gender bias plays in stop disposition.

Table 32. Male subjects were significantly more likely to be arrested – regardless of PPB division.

		Total Stops		Enforcement Action											
				None		Warning		Citation		Cite-in-Lieu		Juvenile Summons		Arrested	
	Gender	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Traffic	Female	1,190	31.9%	20	1.7%	262	22.0%	887	74.5%	12	1.0%	0	0.0%	9	0.8%
	Male	2,528	67.8%	19	0.8%	633	25.0%	1,791	70.8%	33	1.3%	0	0.0%	52	2.1%
	Non-Binary	11	0.3%	0	0.0%	2	18.2%	9	81.8%	0	0.0%	0	0.0%	0	0.0%
	Total	**3,729**	**100.0%**	**39**	**1.1%**	**897**	**24.3%**	**2,687**	**72.9%**	**45**	**1.2%**	**0**	**0.0%**	**61**	**1.7%**

		Total Stops		Enforcement Action											
				None		Warning		Citation		Cite-in-Lieu		Juvenile Summons		Arrested	
	Gender	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Non-Traffic	Female	2,834	27.4%	115	4.1%	1,943	68.6%	621	21.9%	43	1.5%	0	0.0%	112	4.0%
	Male	7,451	72.0%	383	5.1%	5,083	68.2%	1,359	18.2%	135	1.8%	3	0.0%	488	6.5%
	Non-Binary	61	0.6%	18	29.5%	34	55.7%	6	9.8%	0	0.0%	0	0.0%	3	4.9%
	Total	**10,346**	**100.0%**	**516**	**5.1%**	**7,060**	**69.5%**	**1,986**	**19.5%**	**178**	**1.8%**	**3**	**0.0%**	**603**	**5.9%**

[166] Traffic: $x^2 = 20.193, p < .001, df = 4$; Non-Traffic: $x^2 = 44.158, p < .001, df = 4$

APPENDIX F: PERCEIVED AGE ANALYSIS

Table 33. Adults aged 25 or Older are the most commonly stopped group of drivers.

		2017		2018		2019		2020		2021	
	Age	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Traffic	Under 16	6	0.1%	4	0.0%	13	0.1%	18	0.1%	4	0.1%
	16 to 24	1,984	18.5%	2,417	18.3%	2,519	17.3%	2,692	19.7%	611	16.4%
	25 or Over	8,699	81.0%	10,747	81.5%	12,000	82.6%	10,930	80.1%	3,110	83.5%
	Unknown^	45	0.4%	13	0.1%	--	--	--	--	--	--
	Traffic Total	**10,734**	**100%**	**13,181**	**100%**	**14,532**	**100%**	**13,640**	**100%**	**3,725**	**100%**
		2017		**2018**		**2019**		**2020**		**2020**	
	Age	**Count**	**Percent**	**Count**	**Percent**	**Count**	**Percent**	**Count**	**Percent**	**Count**	**Percent**
Non-Traffic	Under 16	16	0.1%	23	0.1%	28	0.2%	23	0.2%	21	0.2%
	16 to 24	2,481	21.5%	2,960	18.3%	2,810	15.2%	1,666	14.7%	1,528	14.8%
	25 or Over	8,883	76.9%	13,071	81.0%	15,665	84.7%	9,662	85.1%	8,754	85.0%
	Unknown^	167	1.4%	91	0.6%	--	--	--	--	--	--
	Non-Traffic Total	**11,547**	**100%**	**16,145**	**100%**	**18,503**	**100%**	**11,351**	**100%**	**10,303**	**100%**

^ Unknown was removed as an available option on June 27, 2018.

Table 34. Traffic and Non-Traffic officers stopped different ages of pedestrians at similar rates.

		2017		2018		2019		2020		2021	
	Age	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Traffic	Under 16	0	0.0%	0	0.0%	0	0.0%	1	2.6%	0	0.0%
	16 to 24	10	14.3%	9	12.7%	11	11.3%	8	21.1%	1	25.0%
	25 or Over	60	85.7%	62	87.3%	86	88.7%	29	76.3%	3	75.0%
	Unknown^	0	0.0%	0	0.0%	--	--	--	--	--	--
	Traffic Total	**70**	**100%**	**71**	**100%**	**97**	**100%**	**38**	**100%**	**4**	**100%**
		2017		**2018**		**2019**		**2020**		**2020**	
	Age	**Count**	**Percent**	**Count**	**Percent**	**Count**	**Percent**	**Count**	**Percent**	**Count**	**Percent**
Non-Traffic	Under 16	1	0.8%	4	0.8%	3	0.3%	1	0.5%	0	0.0%
	16 to 24	15	12.6%	48	9.4%	66	6.4%	13	6.4%	8	18.6%
	25 or Over	101	84.9%	457	89.8%	965	93.3%	189	93.1%	35	81.4%
	Unknown^	2	1.7%	0	0.0%	--	--	--	--	--	--
	Non-Traffic Total	**119**	**100%**	**509**	**100%**	**1,034**	**100%**	**203**	**100%**	**43**	**100%**

^ Unknown was removed as an available option on June 27, 2018.

After the completion of the stop, Portland Police Bureau officers indicate their perception of the stopped subject's perceived age[167]. Like the prior four years, the 25 or Over group was the most stopped group in 2021 – representing 84.6 percent of all stops – followed by 16 to 24 (15.3%), and Under 16 (0.2%). There have been no significant changes in the stop rates for any perceived age group over the past five years.

[167] Prior to June 27, 2018, officers indicated the subject's perceived age in four broad categories: Under 16, 16 to 24, 25 or Over, and Unknown. After June 27, the officer enters an integer (i.e., 35) based on their perception or the subject's actual age from their state-issued identification. All integers were converted to categories to ease interpretation and comparison over time.

The use of reporting by integer provides the opportunity to analyze stop patterns for additional age categories than originally collected. Research indicates that drivers aged 65 or Over – when controlling for miles driven – are about as likely to crash as drivers under the age of 25[168]. Age also generally increases a person's risk for injury in a collision[169], with some of the highest fatality rates for subjects over the age of 65[170]. For all 2021 analyses, a new category was generated from the existing data to better understand how the perceived age of subjects over 65 affects stop rates along with other age groupings. The operational divisions display differential stop patterns for drivers[171], with Traffic officers stopping significantly more 65 or Older and 16 to 24 drivers, and significantly less 25 to 64 year olds drivers than Non-Traffic units.

Table 35. Traffic Officers stopped significantly more 16 to 24 and 65 or Older drivers.

		Drivers		Pedestrians	
		2021		2021	
	Age	Count	Percent	Count	Percent
Traffic	Under 16	4	0.1%	0	0.0%
	16 to 24	611	16.4%	1	25.0%
	25 to 64	2,949	79.2%	3	75.0%
	65 or Older	161	4.3%	0	0.0%
	Traffic Total	**3,725**	**100%**	**4**	**100%**
		2021		2021	
	Age	Count	Percent	Count	Percent
Non-Traffic	Under 16	21	0.2%	0	0.0%
	16 to 24	1,528	14.8%	8	18.6%
	25 to 64	8,499	82.5%	35	81.4%
	65 or Older	255	2.5%	0	0.0%
	Non-Traffic Total	**10,303**	**100%**	**43**	**100%**

Similar to gender analyses, there are no research-supported benchmarks assessing whether officers potentially display bias when choosing to stop a driver based on their perceived age. It's further complicated by the fact that age is not a protected class when it comes to insurance risk analyses[172], with the State explicitly allowing differential premiums[173] for drivers under the age of 25 and over the age of 55 (without an authorized prevention course) due to their risk of being involved in a motor vehicle collision. If officers are making stops based on dangerous driving behaviors, there is a likelihood that a greater number of young drivers (and those 55 or over) would be stopped when compared to their population rate. Nationally, there are also significant differences when it comes to crime victimization based on the victim's age, making any victimization benchmark problematic[174].

Table 36. 2021 Injury Collision Statistics, by Age of Drivers

	2021	
Age	Count	Percent
Under 16	9	0.7%
16 to 24	182	13.6%
25 to 64	1,030	76.8%
65 or Over	120	8.9%
Total	**1,341**	**100.0%**

168 National Highway Traffic Safety Administration. (1993). *Addressing the Safety Issues Related to Younger and Older Drivers: A Report to Congress January 19, 1993 on the Research Agenda of the National Highway Traffic Safety Administration.* Washington, DC: Department of Transportation.

169 Kahane, C. J. (2013). *Injury vulnerability and effectiveness of occupant protection technologies for older occupants and women.* (Report No. DOT HS 811 766). Washington, DC: National Highway Traffic Safety Administration.

170 Chang., D. (2008). *Comparison of Crash Fatalities by Sex and Age Group.* (Report No. DOT HS 810 853). Washington DC: National Highway Traffic Safety Administration.

171 $x^2 = 41.041, p < .001, df = 3$

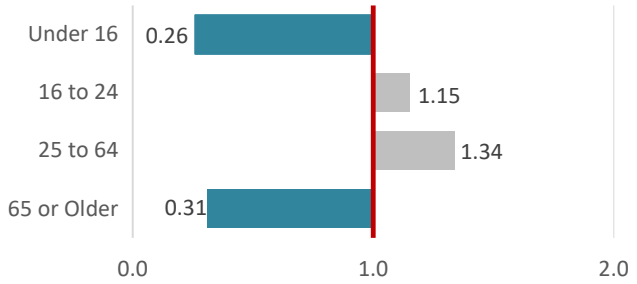
172 OAR 836-080-0055

173 ORS 742.490

174 Morgan, R.E., & Truman, J.L. (2018). *Criminal Victimization, 2017* (NCJ 252472). Washington, D.C.: Bureau of Justice Statistics, U.S. Department of Justice.

Accounting for the factors discussed above, the Injury Collision Benchmark (based on the age of involved drivers) was used for all operational groups of the Bureau. Based on the reported perceived age of stopped drivers involved in injury collisions, older drivers (65 or Older) and younger drivers (Under 16) are stopped less than expected when compared to injury collision rates. All other age groups were stopped at expected rates. No comparable benchmark exists for pedestrian stops, so no analysis was conducted.

Figure 17. Officers stopped fewer drivers aged 16 or Under or 65 or Older than expected compared to injury collision rates.



Stop Reasons

Table 37. Non-Traffic officers displayed differential stop patterns based on the age of the driver.

		Moving Violations				Non-Moving Violations		Non-Traffic Offenses	
		Dangerous		Minor					
	Age	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Traffic	Under 16	3	75.0%	1	25.0%	0	0.0%	0	0.0%
	16 to 24	511	83.6%	85	13.9%	14	2.3%	1	0.2%
	25 to 64	2,207	74.8%	645	21.9%	91	3.1%	6	0.2%
	65 or Older	92	57.1%	64	39.8%	4	2.5%	1	0.6%
	Traffic Total	**2,813**	**75.5%**	**795**	**21.3%**	**109**	**2.9%**	**8**	**0.2%**

		Moving Violations				Non-Moving Violations		Non-Traffic Offenses	
		Dangerous		Minor					
	Age	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Non-Traffic	Under 16	10	47.6%	2	9.5%	6	28.6%	3	14.3%
	16 to 24	976	63.9%	160	10.5%	381	24.9%	11	0.7%
	25 to 64	4,232	49.8%	965	11.4%	3,155	37.1%	147	1.7%
	65 or Older	153	60.0%	29	11.4%	68	26.7%	5	2.0%
	Non-Traffic Total	**5,371**	**52.1%**	**1,156**	**11.2%**	**3,610**	**35.0%**	**166**	**1.6%**

Table 38. Most pedestrians were stopped for Minor Moving Violations by Traffic officers or Non-Traffic offenses by Non-Traffic personnel.

		Moving Violations				Non-Moving Violations		Non-Traffic Offenses	
		Dangerous		Minor					
	Age	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Traffic	Under 16	--	--	--	--	--	--	--	--
	16 to 24	1	100.0%	0	0.0%	0	0.0%	0	0.0%
	25 to 64	1	33.3%	1	33.3%	0	0.0%	1	33.3%
	65 or Older	--	--	--	--	--	--	--	--
	Traffic Total	**2**	**50.0%**	**1**	**25.0%**	**0**	**0.0%**	**1**	**25.0%**

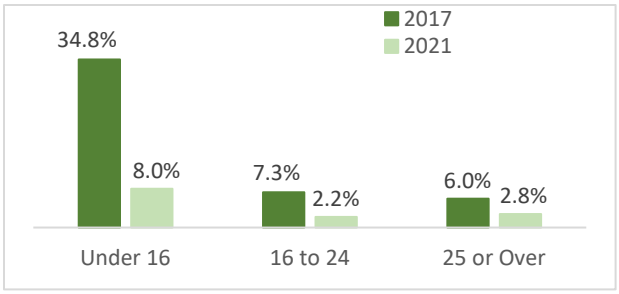
		Moving Violations				Non-Moving Violations		Non-Traffic Offenses	
		Dangerous		Minor					
	Age	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Non-Traffic	Under 16	--	--	--	--	--	--	--	--
	16 to 24	0	0.0%	1	12.5%	0	0.0%	7	87.5%
	25 to 64	6	17.1%	8	22.9%	4	11.4%	17	48.6%
	65 or Older	--	--	--	--	--	--	--	--
	Non-Traffic Total	**6**	**14.0%**	**9**	**20.9%**	**4**	**9.3%**	**24**	**55.8%**

Non-Traffic and Traffic display significantly different stop patterns based on the perceived age of the driver. Drivers perceived to be between the ages of 25 to 64 were significantly more likely to only be stopped for the reasonable suspicion / probable cause of another crime, whereas drivers aged 16 to 24 were significantly more likely to be stopped only for traffic offenses[175]. Those aged 16 to 24 and 65 or Older were also significantly more likely to be stopped for a Dangerous Driving Behavior while those aged 25 to 64 were stopped for more Non-Moving Offenses[176]. Traffic[177] officers were significantly more likely to stop drivers aged 16 to 24 for Dangerous Driving Behaviors while those aged 65 or Older were significantly more likely to be stopped for Minor Moving Violations. No pedestrian analyses were conducted due to small sample size for both divisions.

Search Rates by Age Group

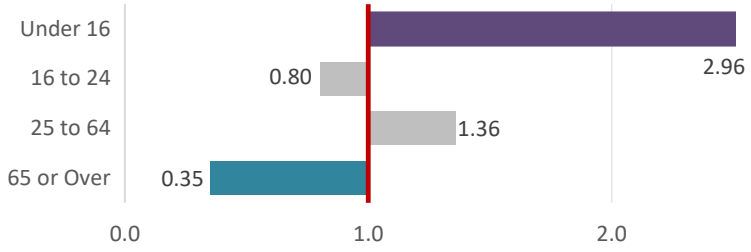
Search rates have declined for all perceived age groups over the past five years, significantly so for those aged 16 to 24 and 25 or Over[178]. There were no significant differences in the consent request[179] or consent denial rate[180] between the different perceived age groups. All groups of subjects were searched at approximately the same rate for Consent[181] and Warrant Exception[182] searches; however, subjects aged 16 to 24 were significantly more likely[183] to be searched with a Warrant than 25 to 64 year olds.

Figure 18. Search rates decreased across all age groups since 2017.



Portland Police officers displayed disparate search patterns based on the perceived age of the subject. Stopped subjects aged 65 or Over were searched less than expected compared to overall search rates. Additionally, subjects under the age of 16 were searched substantially more than expected; however, the group represents less than 1 percent of all stops and searches and the small sample size is particularly sensitive to all disparity analyses. There were significant differences in search rates between groups with adequate sample sizes[184], but no pairwise differences between the groups.

Figure 19. Subjects perceived to be Under 16 were searched substantially more than expected compared to overall stop



[175] $x^2 = 12.117, p < .003, df = 2$
[176] $x^2 = 122.219, p < .001, df = 6$
[177] $x^2 = 55.691, p < .001, df = 4$
[178] Under 16: $p < .26, r^2 = .39$; 16 to 24: $p < .005, r^2 = .95$; 25 or Over: $p < .02, r^2 = .90$
[179] $x^2 = 7.560, p < .06, df = 3$
[180] $x^2 = 0.244, p < .63, df = 1$
[181] $x^2 = 1.039, p < .31, df = 1$
[182] $x^2 = 0.289, p < .60, df = 1$
[183] $x^2 = 7.142, p < .009, df = 1$
[184] $x^2 = 7.507, p < .03, df = 2$

Table 39. Warrant Exception searches were the primary search type across most age groups.

		Total Subjects Searched		Consent		Warrant		Warrant Exception	
	Age	Searches	Rate	Count	Percent	Count	Percent	Count	Percent
Traffic	Under 16	0	0.0%	--	--	--	--	--	--
	16 to 24	7	1.1%	1	14.3%	2	28.6%	5	71.4%
	25 to 64	21	0.7%	7	33.3%	1	4.8%	19	90.5%
	65 or Older	0	0.0%	--	--	--	--	--	--
	Total	**28**	**0.8%**	**8**	**28.6%**	**3**	**10.7%**	**24**	**85.7%**

		Total Subjects Searched		Consent		Warrant		Warrant Exception	
	Age	Searches	Rate	Count	Percent	Count	Percent	Count	Percent
Non-Traffic	Under 16	2	9.5%	1	50.0%	1	50.0%	0	0.0%
	16 to 24	41	2.7%	19	46.3%	4	9.8%	25	61.0%
	25 to 64	306	3.6%	155	50.7%	11	3.6%	172	56.2%
	65 or Older	4	1.6%	1	25.0%	2	50.0%	2	50.0%
	Total	**353**	**3.4%**	**176**	**49.9%**	**18**	**5.1%**	**199**	**56.4%**

- NOTE: More than one search type can be utilized and recorded on each interaction

Contraband Hit Rates

There were no statistical differences[185] in the rate that contraband was discovered and the perceived age of the stopped subject. Portland Police officers found contraband on a majority of all searches, regardless of the age of the subject being searched. Among the groups with adequate sample sizes, Drugs and Other Contraband were the most commonly uncovered items on subjects between the ages of 25 and 64, while Alcohol and Other Contraband were most commonly found on subjects aged 16 to 24.

Table 40. Contraband hit rates are similar for all perceived age groups.

	Total Searches	Found Contraband		Alcohol		Drugs		Firearms		Other Weapons		Stolen Property		Other	
Age	Count	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Under 16	2	1	50.0%	0	0.0%	0	0.0%	1	50.0%	0	0.0%	0	0.0%	1	50.0%
16 to 24	48	28	58.3%	12	25.0%	5	10.4%	7	14.6%	2	4.2%	1	2.1%	8	16.7%
25 to 64	327	207	63.3%	50	15.3%	80	24.5%	48	14.7%	23	7.0%	21	6.4%	51	15.6%
65 or Older	4	3	75.0%	1	25.0%	1	25.0%	2	50.0%	0	0.0%	0	0.0%	0	0.0%
Total	**381**	**239**	**62.7%**	**63**	**16.5%**	**86**	**22.6%**	**58**	**15.2%**	**25**	**6.6%**	**22**	**5.8%**	**60**	**15.7%**

Stop Outcomes

Stop dispositions reported by PPB Traffic[186] and Non-Traffic[187] officers varied significantly by the perceived age of the stopped subject. Subjects 65 or Over were significantly more likely to receive a Warning – while those aged 16 to 24 were more likely to receive a Citation – than any other age group when stopped by Traffic officers. Non-Traffic officers were significantly more likely to arrest subjects aged 25 to 64 at the end of a stop. The progressive nature of a stop, and the multiple decision points within the interaction, make it difficult to discern what role, if any, age plays in stop disposition.

[185] $x^2 = 0.442, p < .51, df = 1$
[186] $x^2 = 52.759, p < .001, df = 6$
[187] $x^2 = 101.443, p < .001, df = 8$

Table 41. Both operational divisions of the PPB displayed different patterns based on age of subject.

		Total Stops		Enforcement Action											
				None		Warning		Citation		Cite-in-Lieu		Juvenile Summons		Arrested	
	Age	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Traffic	Under 16	4	0.1%	0	0.0%	0	0.0%	4	100.0%	0	0.0%	0	0.0%	0	0.0%
	16 to 24	612	16.4%	7	1.1%	94	15.4%	500	81.7%	3	0.5%	0	0.0%	8	1.3%
	25 to 64	2,952	79.2%	30	1.0%	739	25.0%	2,090	70.8%	40	1.4%	0	0.0%	53	1.8%
	65 or Over	161	4.3%	2	1.2%	64	39.8%	93	57.8%	2	1.2%	0	0.0%	0	0.0%
	Traffic Total	**3,729**	**100.0%**	**39**	**1.1%**	**897**	**24.3%**	**2,687**	**72.9%**	**45**	**1.2%**	**0**	**0.0%**	**61**	**1.7%**

		Total Stops		Enforcement Action											
				None		Warning		Citation		Cite-in-Lieu		Juvenile Summons		Arrested	
	Age	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Non-Traffic	Under 16	21	0.2%	3	14.3%	11	52.4%	3	14.3%	0	0.0%	0	0.0%	4	19.0%
	16 to 24	1,536	14.8%	66	4.3%	967	63.0%	422	27.5%	23	1.5%	3	0.2%	55	3.6%
	25 to 64	8,534	82.5%	435	5.1%	5,902	69.2%	1,505	17.6%	153	1.8%	0	0.0%	539	6.3%
	65 or Over	255	2.5%	12	4.7%	180	70.6%	56	22.0%	2	0.8%	0	0.0%	5	2.0%
	Non-Traffic Total	**10,346**	**100.0%**	**516**	**5.1%**	**7,060**	**69.5%**	**1,986**	**19.5%**	**178**	**1.8%**	**3**	**0.0%**	**603**	**5.9%**

APPENDIX G: PERCEIVED MENTAL HEALTH STATUS ANALYSIS

The Portland Police Bureau began collecting officers' perceptions on the stopped subject's mental health status on October 1, 2014[188] as a component of the City's settlement agreement with the United States Department of Justice[189]. Officers are mandated to indicate whether they perceive if the subject has a mental health issue by using one of three options: Yes, No, or Unknown. Since 2017, fewer subjects are being classified as Unknown (9.8% in 2017 vs. 2.0% in 2021) while subjects that were perceived to not have a mental health issue (89.8% in 2017 vs. 97.1% in 2021) have increased over the same time period – although at non-significant rates[190]. Subjects with a perceived mental health issued has slightly increased[191] over the last five years (0.4% in 2017 vs 0.9% in 2021). In 2021, Non-Traffic Officers were significantly more likely[192] to indicate that the subject's status was unknown. The PPB does not collect the perceived mental health status for individuals involved in injury collision accidents, so there is no research-supported benchmark to compare to for disparity analyses.

Table 42. Non-Traffic Officers were significantly more likely to identify that a subject's mental health status was unknown at the time of the stop.

		2017		2018		2019		2020		2021	
	Mental Health Status	**Count**	**Percent**	**Count**	**Percent**	**Count**	**Percent**	**Count**	**Percent**	**Count**	**Percent**
Traffic	No Perceived Mental Health Issue	9,465	88.2%	12,577	95.4%	14,408	99.1%	13,563	99.4%	3,461	97.6%
	Perceived Mental Health Issue	19	0.2%	34	0.3%	45	0.3%	53	0.4%	60	1.7%
	Unknown Mental Health Issue	1,250	11.6%	570	4.3%	79	0.5%	24	0.2%	24	0.7%
	Traffic Total	**10,734**	**100%**	**13,181**	**100%**	**14,532**	**100%**	**13,640**	**100%**	**3,545**	**100%**
		2017		**2018**		**2019**		**2020**		**2021**	
	Mental Health Status	**Count**	**Percent**	**Count**	**Percent**	**Count**	**Percent**	**Count**	**Percent**	**Count**	**Percent**
Non-Traffic	No Perceived Mental Health Issue	10,540	91.3%	15,415	95.5%	18,151	98.1%	11,042	97.3%	9,992	97.0%
	Perceived Mental Health Issue	57	0.5%	64	0.4%	41	0.2%	35	0.3%	52	0.5%
	Unknown Mental Health Issue	950	8.2%	666	4.1%	311	1.7%	274	2.4%	259	2.5%
	Non-Traffic Total	**11,547**	**100%**	**16,145**	**100%**	**18,503**	**100%**	**11,351**	**100%**	**10,303**	**100%**

Table 43. Pedestrians were more likely to be perceived to be having a mental health issue.

		2017		2018		2019		2020		2021	
	Mental Health Status	**Count**	**Percent**	**Count**	**Percent**	**Count**	**Percent**	**Count**	**Percent**	**Count**	**Percent**
Traffic	No Perceived Mental Health Issue	64	91.4%	62	87.3%	92	94.8%	37	97.4%	4	100.0%
	Perceived Mental Health Issue	2	2.9%	3	4.2%	5	5.2%	1	2.6%	0	0.0%
	Unknown Mental Health Issue	4	5.7%	6	8.5%	0	0.0%	0	0.0%	0	0.0%
	Traffic Total	**70**	**100%**	**71**	**100%**	**97**	**100%**	**38**	**100%**	**4**	**100%**
		2017		**2018**		**2019**		**2020**		**2021**	
	Mental Health Status	**Count**	**Percent**	**Count**	**Percent**	**Count**	**Percent**	**Count**	**Percent**	**Count**	**Percent**
Non-Traffic	No Perceived Mental Health Issue	108	90.8%	460	90.4%	941	91.0%	181	89.2%	31	72.1%
	Perceived Mental Health Issue	4	3.4%	23	4.5%	56	5.4%	14	6.9%	8	18.6%
	Unknown Mental Health Issue	7	5.9%	26	5.1%	37	3.6%	8	3.9%	4	9.3%
	Non-Traffic Total	**119**	**100%**	**509**	**100%**	**1,034**	**100%**	**203**	**100%**	**43**	**100%**

[188] The reports of the perceived mental health status in 2017 is lower than the reported number of stops for that year due to old computer hardware not displaying the question correctly.
[189] United States of America v. City of Portland, No. 3:12-cv-02265-SI (D. Ore. 2012).
[190] No: $p < .12$, $r^2 = .61$; Unknown: $p < .10$, $r^2 = .66$
[191] $p < .14$, $r^2 = .58$
[192] $x^2 = 82.708$, $p < .001$, $df = 2$
(footnote continued)

Stop Reasons

The small expected counts of subjects perceived to have a mental health issue or those with an unknown mental health status prohibits the utilization of inferential statistical analyses to determine what differences exist, if any, with and between the different operational divisions of the Portland Police Bureau or differences between pedestrians and drivers. Drivers with an Unknown Mental Health Issue were significantly more likely to be stopped for a Non-Traffic Offense[193], while drivers with No Perceived Mental Health Issue were significantly more likely to be stopped for a Non-Moving Violation. About six percent of those with an Unknown Mental Health Issue were stopped for the reasonable suspicion / probable cause of another crime, compared to about two percent of those without a mental health issue.

Table 44. Subjects with an unknown mental health issue were significantly more likely to be stopped for Non-Traffic Offenses.

		Moving Violations				Non-Moving Violations		Non-Traffic Offenses	
		Dangerous		Minor					
	Mental Health Status	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Traffic	No Perceived Mental Health Issue	2,762	75.9%	764	21.0%	107	2.9%	8	0.2%
	Perceived Mental Health Issue	30	50.0%	29	48.3%	1	1.7%	0	0.0%
	Unknown Mental Health Issue	21	87.5%	2	8.3%	1	4.2%	0	0.0%
	Traffic Total	**2,813**	**75.5%**	**795**	**21.3%**	**109**	**2.9%**	**8**	**0.2%**

		Moving Violations				Non-Moving Violations		Non-Traffic Offenses	
		Dangerous		Minor					
	Mental Health Status	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Non-Traffic	No Perceived Mental Health Issue	5,196	52.0%	1,118	11.2%	3,524	35.3%	154	1.5%
	Perceived Mental Health Issue	31	59.6%	6	11.5%	14	26.9%	1	1.9%
	Unknown Mental Health Issue	44	27.7%	32	20.1%	72	45.3%	11	6.9%
	Non-Traffic Total	**5,271**	**51.7%**	**1,156**	**11.3%**	**3,610**	**35.4%**	**166**	**1.6%**

Table 45. The majority of pedestrians stopped with a perceived mental health issue or unknown mental health issue were stopped for a Non-Traffic Offense.

		Moving Violations				Non-Moving Violations		Non-Traffic Offenses	
		Dangerous		Minor					
	Mental Health Status	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Traffic	No Perceived Mental Health Issue	2	50.0%	1	25.0%	0	0.0%	1	25.0%
	Perceived Mental Health Issue	0	0.0%	0	0.0%	0	0.0%	0	0.0%
	Unknown Mental Health Issue	0	0.0%	0	0.0%	0	0.0%	0	0.0%
	Traffic Total	**2**	**50.0%**	**1**	**25.0%**	**0**	**0.0%**	**1**	**25.0%**

		Moving Violations				Non-Moving Violations		Non-Traffic Offenses	
		Dangerous		Minor					
	Mental Health Status	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Non-Traffic	No Perceived Mental Health Issue	5	16.1%	8	25.8%	3	9.7%	15	48.4%
	Perceived Mental Health Issue	1	12.5%	0	0.0%	1	12.5%	6	75.0%
	Unknown Mental Health Issue	0	0.0%	1	25.0%	0	0.0%	3	75.0%
	Non-Traffic Total	**6**	**14.0%**	**9**	**20.9%**	**4**	**9.3%**	**24**	**55.8%**

[193] $x^2 = 17.557, p < .002, df = 3$

Search Rates by Perceived Mental Health Status

Since the beginning of data collection, individuals with a perceived mental health issue have always been searched at a higher rate than other groups – although the difference is non-significant in 2021[194]. Search rates have generally declined for all groups since 2017[195], although only searches on those without a perceived mental health issue have declined at a significant rate[196]. Small overall search rates of people perceived to be experiencing a mental health issue preclude any in-depth analyses on search types used.

Figure 20. Search rates for subjects perceived to be experiencing a mental health issue have declined since 2016.

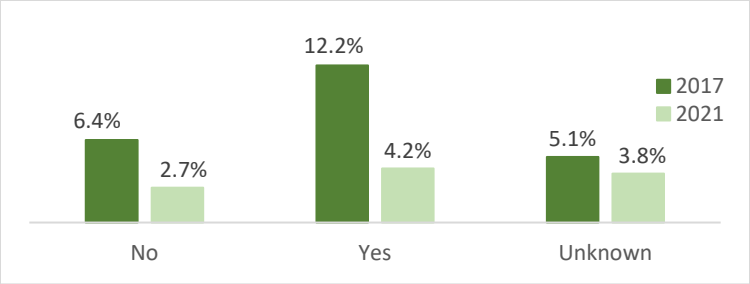


Table 46. Subjects were a perceived mental health issue were not searched significantly more.

		Total Subjects Searched		Consent		Warrant		Warrant Exception	
	Mental Health Status	Searches	Rate	Count	Percent	Count	Percent	Count	Percent
Traffic	No Perceived Mental Health Issue	26	0.7%	8	30.8%	3	11.5%	22	84.6%
	Perceived Mental Health Issue	2	3.3%	0	0.0%	0	0.0%	2	100.0%
	Unknown Mental Health Issue	0	0.0%	--	--	--	--	--	--
	Total	**28**	**0.8%**	**8**	**28.6%**	**3**	**10.7%**	**24**	**85.7%**

		Total Subjects Searched		Consent		Warrant		Warrant Exception	
	Mental Health Status	Searches	Rate	Count	Percent	Count	Percent	Count	Percent
Non-Traffic	No Perceived Mental Health Issue	339	3.4%	168	49.6%	18	5.3%	193	56.9%
	Perceived Mental Health Issue	3	5.0%	2	66.7%	0	0.0%	1	33.3%
	Unknown Mental Health Issue	11	4.2%	6	54.5%	0	0.0%	5	45.5%
	Total	**353**	**3.4%**	**176**	**49.9%**	**18**	**5.1%**	**199**	**56.4%**

- NOTE: More than one search type can be utilized and recorded on each interaction

Contraband Hit Rates

Subjects with an unknown or perceived mental health issue had lower hit rates than the group without any perceived mental health issues, despite garnering a higher search rate from PPB. No statistical analyses could be conducted due to small search rates for subjects with an unknown or perceived mental health issue.

Table 47. Subjects with a perceived or unknown mental health issue were discovered with contraband less often than others despite having a higher overall search rate.

	Total Searches	Found Contraband		Alcohol		Drugs		Firearms		Other Weapons		Stolen Property		Other	
Mental Health Status	Count	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
No Perceived Mental Health Issue	365	229	62.7%	63	17.3%	85	23.3%	56	15.3%	23	6.3%	19	5.2%	56	15.3%
Perceived Mental Health Issue	5	3	60.0%	0	0.0%	0	0.0%	0	0.0%	1	20.0%	1	20.0%	1	20.0%
Unknown Mental Health Issue	11	7	63.6%	0	0.0%	1	9.1%	2	18.2%	1	9.1%	2	18.2%	3	27.3%
Total	**381**	**239**	**62.7%**	**63**	**16.5%**	**86**	**22.6%**	**58**	**15.2%**	**25**	**6.6%**	**22**	**5.8%**	**60**	**15.7%**

[194] $x^2 = 2.421, p < .30, df = 2$

[195] Unknown: $p < .17, r^2 = .52$; Yes: $p < .31, r^2 = .34$

[196] $p < .009, r^2 = .92$

(footnote continued)

Stop Outcomes

Portland Police Bureau officers displayed differential stop outcomes depending on the perceived mental health status of the stopped subject[197]. Subjects without a perceived mental health issue were significantly less likely to be arrested than other subjects. Stopped subjects perceived to have a mental health issue were significantly more likely to receive a citation at the end of the interaction, while those with an unknown mental health condition were significantly more likely to receive no enforcement action. The progressive nature of a stop, and the multiple decision points within the interaction, make it difficult to discern what role, if any, mental health status plays in stop disposition.

Table 48. Subjects perceived to have a mental health issue or those with an unknown mental health issue were arrested at a higher rate than subjects with no known mental health issue.

		Total Stops		Enforcement Action											
				None		Warning		Citation		Cite-in-Lieu		Juvenile Summons		Arrested	
	Mental Health Status	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Traffic	No Perceived Mental Health Issue	3,645	97.7%	39	1.1%	886	24.3%	2,623	72.0%	43	1.2%	0	0.0%	54	1.5%
	Perceived Mental Health Issue	60	1.6%	0	0.0%	4	6.7%	48	80.0%	2	3.3%	0	0.0%	6	10.0%
	Unknown Mental Health Issue	24	0.6%	0	0.0%	7	29.2%	16	66.7%	0	0.0%	0	0.0%	1	4.2%
	Traffic Total	**3,729**	**100.0%**	**39**	**1.1%**	**897**	**24.3%**	**2,687**	**72.9%**	**45**	**1.2%**	**0**	**0.0%**	**61**	**1.7%**

		Total Stops		Enforcement Action											
				None		Warning		Citation		Cite-in-Lieu		Juvenile Summons		Arrested	
	Mental Health Status	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Non-Traffic	No Perceived Mental Health Issue	10,023	96.9%	445	4.4%	6,880	68.6%	1,955	19.5%	170	1.7%	3	0.0%	570	5.7%
	Perceived Mental Health Issue	60	0.6%	5	8.3%	27	45.0%	16	26.7%	2	3.3%	0	0.0%	10	16.7%
	Unknown Mental Health Issue	263	2.5%	66	25.1%	153	58.2%	15	5.7%	6	2.3%	0	0.0%	23	8.7%
	Non-Traffic Total	**10,346**	**100.0%**	**516**	**5.1%**	**7,060**	**69.5%**	**1,986**	**19.5%**	**178**	**1.8%**	**3**	**0.0%**	**603**	**5.9%**

[197] $x^2 = 378.566, p < .001, df = 6$