Appendix C

Impacts of Proposed Amendments on Disadvantaged Communities

I. Introduction

Any new rulemaking or rule amendment in California must consider its impacts on Disadvantaged Communities (DACs). "Disadvantaged Community" means a census tracts or applicable tribal data designated by the California Environmental Protection Agency for the purposes of SB 535[1] using the most current version of CalEnviroScreen by the Office of Environmental Health Hazard Assessment (OEHHA). CalEnviroScreen (CES) is a mapping tool that helps identify California communities that are most affected by many sources of pollution, and where people are often especially vulnerable to pollution's effects (OEHHA, 2022). CalEnviroScreen uses environmental, health, and socioeconomic information to produce scores for every census tract in the state of California. An area with a high score is one that experiences a much higher pollution burden than areas with low scores. The census tracts with the highest 25 percent of overall CES scores are considered DACs (OEHHA, 2022).

The Small Containers of Automotive Refrigerant Regulation's deposit and return program requires that consumers pay a $10 deposit with each container purchased to be returned when the consumer brings the used container back to the retailer. According to annual container sales data provided by container manufacturers and retailers, around 1.53 million containers are sold annually in California and approximately 40 percent of containers are purchased from retailers located in DACs. The cost to repair an MVAC system at an auto shop is typically substantially higher than that of recharging the system with a small container. Consumers may opt to recharge their vehicle multiple times per year due to the high cost of MVAC repair (CARB, 2009).

This analysis reviews the small container sales and return data collected from major container retailers along with CES data to evaluate the impacts of the existing regulation on California consumers.

II. Data Sources and Methodology

Staff analyzed store-by-store container sales and return data from four major retailers of small containers of automotive refrigerant in California, representing over 90 percent of the small container market. Data was provided for over 1,500 individual locations statewide from 2017 to 2020. This information includes store address, sales, and returns.

[1] SB 535 (De León Stats. 2012, ch. 830); Health & Saf. Code §§ 39711, 39713, 39715, 39721, and 39723

Using the program ArcGIS Pro 3.0 (a mapping tool), staff mapped the location of each retail location along with associated container sales and return data. Next, staff mapped the CES score 4.0 data which includes census tract information and a CES score ranging from 0-100. After spatially joining the layers, each retail facility's sales and return information were assigned CES information based on location. The data is split into four categories based the CES score: 0-25, 25-50, 50-75, and 75-100 (which are considered DACs). This analysis focuses on the difference between DACs and non-DACs in California. An assumption made is that all sales and returns within the census tracts belong to the people living within the census tracts as retail location is the highest resolution data available.

III. Results

Figure 1 shows an orange dot for each retail location that provided small container sales and return data. The blue areas are DACs, with a zoomed in map of southern California for clarity. As shown, many container retailers are located in disadvantaged communities.

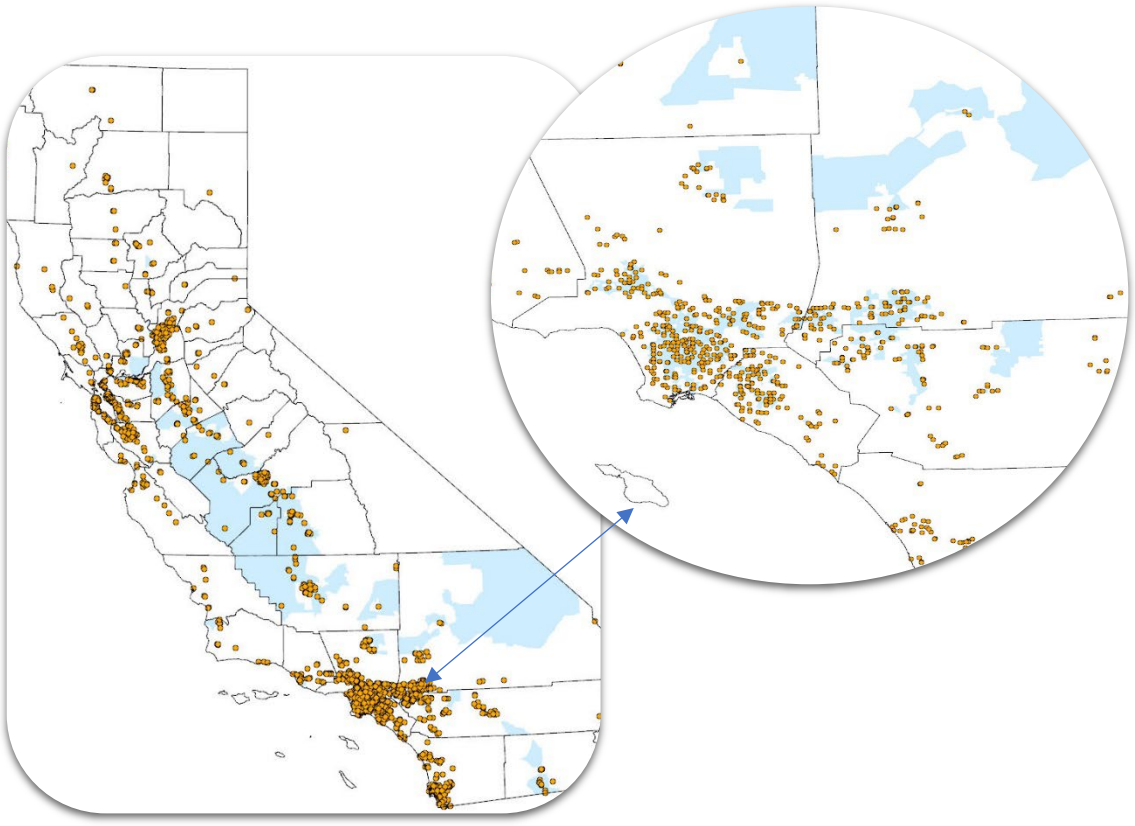

Figure 1. The distribution of the auto parts stores in this analysis, each orange dot representing a retail location. The blue sections of the map represent DACs.

Figure 2 shows the small container sales and return data in four different categories, ranging from least burdened (0-25 score) to DACs (75-100 score). Sales and returns are proportional to the CES scores, indicating that small cans containers used more extensively in DACs than other communities. Container retailers located in DACs also report higher return rates than those located elsewhere. The data in **Figure 2** shows that the return rate in DACs' is 68 percent, up to 10 percent greater than communities with a CES score of 0-25. The overall return rate in 2017-2020 is approximately 63 percent, which is significantly lower than the initially projected rate of 95 percent when the regulation was adopted in 2009 (CARB, 2009). More than one-third, approximately 37 percent, of used containers are not returned and the associated deposits remain unclaimed.

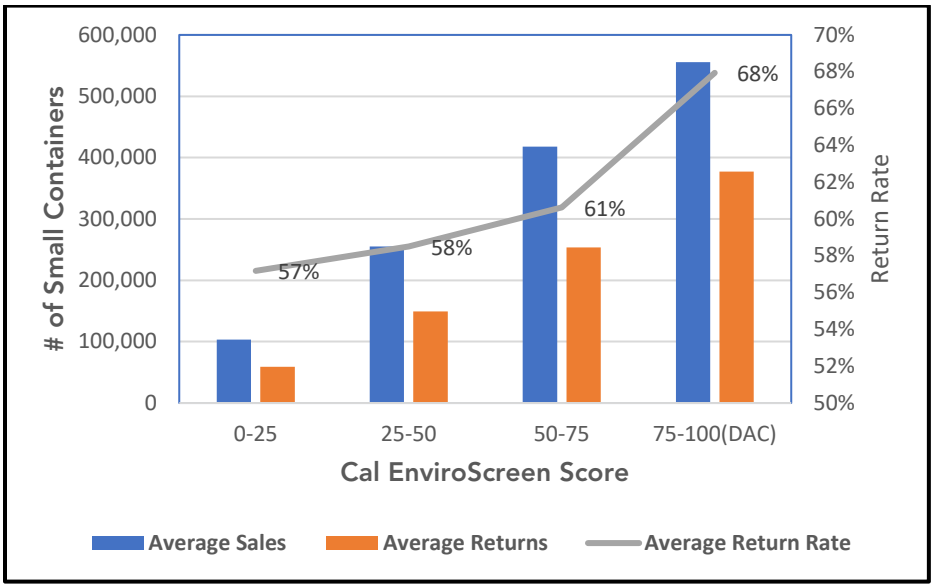

Figure 2. Average sales and returns from 2017-2020 in different communities.

Figure 3 shows the annual average value of unclaimed deposits based on data collected from 2017-2020 from the top 4 retailers of small containers. The total value of unclaimed deposits from all communities is close to $5 million, with deposits collected from DACs accounting for $1.78 million, the highest of the groups shown. Hence, the effect of the deposit and return program is more substantial in DACs.

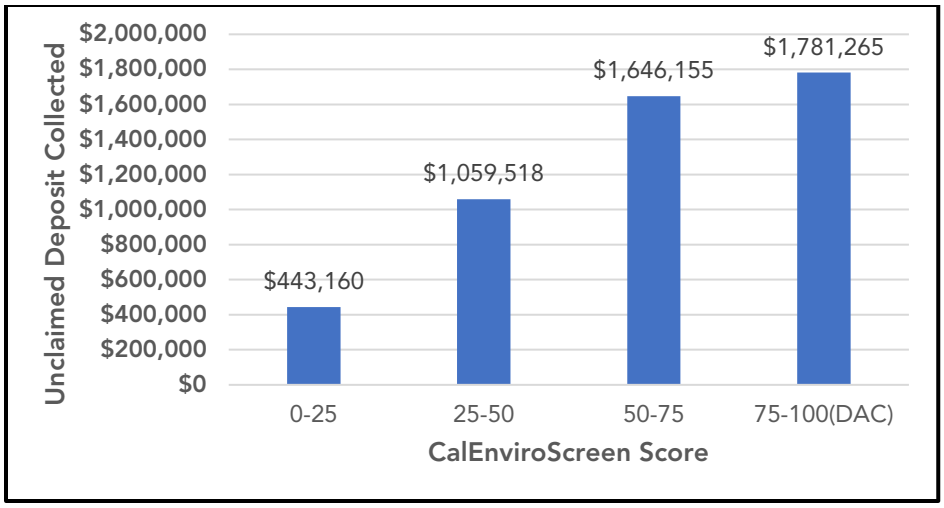

Figure 3. Average unclaimed deposits from 2017-2020 in different communities

IV. Summary

This analysis analyzed the store-by-store sales and return data collected from major retailers and compared it to census tracts using CalEnviroScreen. Staff concludes that the deposit and return program negatively impacts California consumers, with consumers in DACs bearing a disproportionate burden. The removal of deposit and return program will provide savings to all California communities with DACs receiving the greatest benefit without any negative impacts to reducing GHG emissions.

References

CARB. (2009). *Staff Analysis on Emissions and Economic Impact of Proposed Regulation for Small Containers of Automotive Refrigerant*. Retrieved from https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2009/hfc09/hfcappg.pdf

OEHHA. (2022). *California Office of Environmental Helath Hazard Assesment, "Final Designation of Disadvantaged Communities Pursuant to Senate Bill 535"*. Retrieved from https://calepa.ca.gov/wp-content/uploads/sites/6/2022/05/Updated-Disadvantaged-Communities-Designation-DAC-May-2022-Eng.a.hp_-1.pdf