IDENTIFYING IMPACT ZONES

As mandated by ASSEMBLY, No. 21

Cannabis Regulatory Commission
State of New Jersey

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Purpose

To identify Impact Zones in accordance with the "New Jersey Cannabis Regulatory, Enforcement Assistance, and Marketplace Modernization Act"; legalizes personal use cannabis for certain adults, subject to State regulation; decriminalizes small amount marijuana and hashish possession and removes marijuana as a Schedule I drug.

As used in P.L.2021, c.16 (C.24:6I-31 et al.) regarding the personal use of cannabis, unless the context otherwise requires, "Impact Zone" means any municipality, based on past criminal marijuana enterprises contributing to higher concentrations of law enforcement activity, unemployment, and poverty, or any combination thereof, within parts of or throughout the municipality, that:

(1)   Has a population of 120,000 or more according to the most recently compiled federal decennial census as of the effective date of P.L.2021, c.16 (C.24:6I-31 et al.);

(2)   Based upon data for calendar year 2019, ranks in the top 40 percent of municipalities in the State for marijuana- or hashish-related arrests for violation of paragraph (4) of subsection a. of N.J.S.2C:35-10; has a crime index total of 825 or higher based upon the indexes listed in the annual Uniform Crime Report by the Division of State Police; and has a local average annual unemployment rate that ranks in the top 15 percent of all municipalities, based upon average annual unemployment rates estimated for the relevant calendar year by the Office of Research and Information in the Department of Labor and Workforce Development;

(3)   Is a municipality located in a county of the third class, based upon the county's population according to the most recently compiled federal decennial census as of the effective date of P.L.2021, c.16 (C.24:6I-31 et al.), that meets all of the criteria set forth in paragraph (2) other than having a crime index total of 825 or higher; or

(4)   Is a municipality located in a county of the second class, based upon the county's population according to the most recently compiled federal decennial census as of the effective date of P.L.2021, c.16 (C.24:6I-31 et al.):
> *(a)   with a population of less than 60,000 according to the most recently compiled federal decennial census, that for calendar year 2019 ranks in the top 40 percent of municipalities in the State for marijuana- or hashish-related arrests for violation of paragraph (4) of subsection a. of N.J.S.2C:35-10; has a crime index total of 1,000 or higher based upon the indexes listed in the 2019 annual Uniform Crime Report by the Division of State Police; but for calendar year 2019 does not have a local average annual unemployment rate that ranks in the top 15 percent of all municipalities, based upon average annual unemployment rates estimated for the relevant calendar year by the Office of Research and Information in the Department of Labor and Workforce Development; or*
> *(b)   with a population of not less than 60,000 or more than 80,000 according to the most recently compiled federal decennial census; has a crime index total of 650 or higher based upon the indexes listed in the 2019 annual Uniform Crime Report; and for calendar year 2019 has a local average annual unemployment rate of 3.0 percent or higher using the same estimated annual unemployment rates.*

Summary of the Report

Eighty-Seven of New Jersey's 565 municipalities qualified as Impact Zones (See Appendix C) as defined by statute. This represented just over fifteen percent of the municipalities in the state and thirty-two- and one-half percent of the total population. Eighteen of twenty-one counties were represented.

The methodology for the selection of these Impact Zones is included in this report. There were limitations to the data and certain assumptions had to be made. Context for these assumptions is provided in this report, including detailed analysis and justification of each assumption. Certain variables[1] in the model required calculation. Those calculations are presented in this report.

A model[2] was constructed in Microsoft Excel 2021 and then rebuilt in IBM SPSS Statistics Version 29. The model included the various criteria set forth in statute to identify a community as of one of five subsets of Impact Zones. The model is explained in detail in this report. An analysis of the impact of assumptions on the model is also included. Outliers[3] with high values for social-determinant variables are identified.

Finally, included in this report is information generated during the construction of the model and the compilation of the data that might help to inform future policy decisions related to Impact Zones. These include decisions about if and how the Impact Zone requirements might be updated to reflect a change in the circumstances in municipalities over time.

Observations

There are several indicators that the criterion in the statute achieved the legislature's goal of identifying municipalities, based on past criminal marijuana enterprises contributing to higher concentrations of law enforcement activity, unemployment, and poverty, or any combination thereof, within parts of or throughout the municipality.

Table 1: Average Values Comparison

Average Values for Municipalities			
	Impact Zones	Not Qualified	New Jersey
Population	32,892	12,413	15,567
Unemployment	4.57%	3.16%	3.37%
Marijuana Arrests	191	44	67
Crime Index	2372	1555	1662

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[1] A detailed table of variables, descriptions, data sources, number of records and number of missing values is included in Appendix A

[2] Excel File Attached

[3] SPSS considers any data value to be an outlier if it lies outside of the following ranges: 3rd quartile + 1.5*interquartile range. 1st quartile – 1.5*interquartile range.

The data in the table above shows that Impact Zones have an average unemployment rate forty-four percent higher than the municipalities that did not qualify (Table 1). The average number of marijuana arrests was seventy-seven percent higher in Impact Zones and the Crime Index was thirty-four percent higher than municipalities that did not qualify. The population was sixty-one percent higher in municipalities that qualified, when compared to those communities that did not qualify.

There is also some evidence that the goal of prioritizing citizens and communities disproportionately affected by legacy marijuana laws was successful. To compare the relative impact each of these socio-economic determinant variables had on the result a preliminary multi-level binary logistical analysis was conducted. The results, with the relevant output shown in **Table 2**[4] indicate that the number of marijuana possession was the only criteria that met the standard for statistically significant impact on the outcome. This means that the odds of being included as an Impact Zone go up when the Number of Marijuana possessions variable is increased. This is not the case for either the Crime Index or Unemployment Rate variables. When you take into consideration the seventy-seven percent difference between included and excluded municipalities for the Number of Marijuana Arrests variable compared to significantly lower differences for the other variables, it also gives some context to the weight that each variable has as a predictor in the model.

Table 2: Results of Multilevel Binary Logistic Regression

Variables in the Equation	Beta Weight	Significance
Unemployment Rate 2019	-0.032	0.947
Number of Marijuana Possession Violations in 2019	0.008	<.001
2019 Crime Index Total	0	0.671
Constant	-7.533	<.001

The other two possible criteria for inclusion, population and county class, were intentionally excluded from this regression model, which was only designed to compare the social determinants. Had the categorical variable of county class or the continuous variable of population been included in a predictive model[5], both variables would have had the largest impact on the model based on the large difference in population between the municipalities that were included and those that were not and the high percentage of included municipalities coming from Class 2 counties. Looking ahead, a more rigorous statistical analysis of the weight of variables in the model might provide additional context for future policy.

Unexpected Results Impact

The statute clearly states that all categories would not be used equally when, in the definition of Impact Zones is states "or any combination thereof". The legislation adds that the goal is to target communities that, "based on past criminal marijuana enterprises contributing to higher concentrations of law enforcement activity". Later we will consider the implications of using the raw number of marijuana arrests rather than a value normalized to account for population, there is some ambiguity as to which

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[4] This is a redacted version of the output of the model. Designed to be instructive rather than definitive.
[5]

would best represent a "concentration" which Webster Dictionary defines as "a close gathering of people or things".

That said, there were still some results that need further examination simply since they did not appear to "fit" based on the overall spirit of the Impact Zone statute. To give context to these results, median family income was incorporated into the analysis of the results (Appendix B).

Twenty-one municipalities with median family incomes above New Jersey's average median family income qualified as Impact Zones. Table 2 below shows the Impact Zone with the highest median family income.

Table 3: Highest Median Family Income Among Impact Zones

Municipalities	Average of Median Income	Percent of NJ Median Family Income
Morris Plains borough	127,226	154%

Table 3 Shows an example of the calculation for one of these high-income outliers.

Table 4: Typical High Income Impact Zone Breakdown

Municipality:	Metuchen borough	(Median Inc $126,123)
County	Middlesex	
Population	13574	With a population of under 60k
County Class	2	Is in a county of the Second Class
Unemployment	2.4	And Unemployment LESS than 85% of State Average
Rank Unemployment	13%	And Unemployment LESS than 85% of State Average
Marijuana Violations	151	Ranks in the top 40 percent of marijuana arrests
Rank Marijuana Possession	90%	Ranks in the top 40 percent of marijuana arrests
2019 Crime Index Total*	1234	Has a Crime Index Greater than 1000 (52% of towns)

This municipality qualified under Class 4(a) Impact Zone requirements. This was the case for eighteen of the twenty-two Impact Zones with median incomes above the state average (Appendix B). It is important to note that this requirement specifically states:

> (4) Is a municipality located in a county of the second class, based upon the county's population according to the most recently compiled federal decennial census as of the effective date of P.L.2021, c.16 (C.24:6I-31 et al.):
> (a) with a population of less than 60,000 according to the most recently compiled federal decennial census, that for calendar year 2019 ranks in the top 40 percent of municipalities in the State for marijuana- or hashish-related arrests for violation of paragraph (4) of subsection a. of N.J.S.2C:35-10; has a crime index total of 1,000 or higher based upon the indexes listed in the 2019 annual Uniform Crime Report by the Division of State Police; **but for calendar year 2019 does not have a local average annual unemployment rate that ranks in the top 15 percent of all municipalities,** based upon average annual unemployment rates estimated for the relevant calendar year by the Office of Research and Information in the Department of Labor and Workforce Development; or

Given the language in the law, communities in counties of the second class, with high unemployment rates, could have been excluded from the list, while those with lower rates were included. This is potentially a controversial issue that should be flagged before final decisions are made.

The map in Appendix H shows the relative distribution of income data among the Impact Zones[6]. In general, the CRC should anticipate questions around how the very highest (perhaps above 110 percent) of the median income were disproportionally impacted, "based on past criminal marijuana enterprises contributing to higher concentrations of law enforcement activity" and high values in the various other social determinant criteria the legislature has outlined.

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[6] The highest value on the map is higher than in the table because the map is aggregated at the zip code level

Methodology

1. Identify necessary data sources
2. Compile and inspect the data
3. Merge the data
4. Clean the data and evaluate completeness
5. Incorporate necessary calculated variables into the model
6. Build the model in Microsoft Excel based on legislatively mandated criterion
7. Triangulate data by comparing values in the model to raw data sources
8. Rebuild the model in IBM SPSS Version 29
9. Analyze the results (Incorporate Median Income variable for context)
10. Write the draft report
11. Third party triangulation audit by the Office of Innovation, State of New Jersey[7]
12. Write final report

Qualifications

This report is not intended to be the equivalent of a scientific study. It was conducted solely to give context to the results of the Impact Zone model and to provide a resource for further triangulation and consideration of the results. Finally, these data were compiled from different sources and merged into one table/matrix with the unique identifier being municipality. As discussed further below, the structure of the raw data and the naming conventions varied among the data sets. This required some commonsense assumptions to be made.

Assumptions, Limitations, & Further Consideration of Variables

Below is an analysis of each variable included in the model used to determine whether a municipality qualified as an Impact Zone.

Municipality

Assumptions:
That the list universe of possible municipalities and the naming convention associated with each, would be determined by the 2010 Decennial census.

Limitations:
There were 566 records in the census and 565 in the final table. This was due to the merger of Princeton Borough and Princeton Township into one municipality in 2013. In addition, the naming conventions in each data set did not align one-to-one with each other, this required some assumptions to be made. For the most part these were commonsense assumptions and do not

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[7] "CRC devised and used a matrix covering the entire state using both statutorily mandated inputs and other data relevant to the equitable distribution of the funds generated by the program. At CRC's request, Neha Bharambe, a data scientist with the Office of Innovation's Analytics and Impact Assessment Team, reviewed both the matrix and it's output for statistical rigor and concluded they were valid."

need to be discussed in detail in this report. One example would be "Dover town" vs "Dover" or Salem" vs "Salem city".

County

The twenty-one counties in New Jersey were included.

Population from 2010 Decennial Census

Assumptions:
The statute defined the variable as, "Has a population of 120,000 or more according to the most recently compiled federal decennial census as of the effective date of P.L.2021, c.16 (C.24:6I-31 et al.)." As of the writing of this report the full results of the 2020 Decennial Census have not been released for public consumption. The question as to whether the information had been completely "compiled" at the time the law was passed, is not one the Commission can answer. The Commission believes this rendered moot by the unavailability of the data at the time that the Impact Zones needed to be determined. For further context, the American Community Survey ("ACS") estimates a general trend in which the relative percentile rank of a municipalities population when compared the 2010 Census to the 2019 ACS was not likely to change enough to impact the results. Finally, the Crime Index is a normalized variable based on population per 100,000 residents. The data used by the police to drive this calculation could not have come from the 2020 Decennial Census, therefore an exact "apples-to-apples' comparison would not exist if different population data was used.

Descriptive Statistics:
Table 5: Population Descriptive Statistics

Descriptive Statistic	Value
Number Valid	565
Number Missing	0
Mean	15567
Median	8079
Std. Deviation	23581
Range	14
Minimum	5
Maximum	277140
Skewness	5.371
Extreme >=40191	53

Figure 1: Population Distribution

Histogram

Mean = 15566.81
Std. Dev. = 23581.431
N = 565

(Y-axis: Frequency; X-axis: Population from 2010 Decennnial Census)
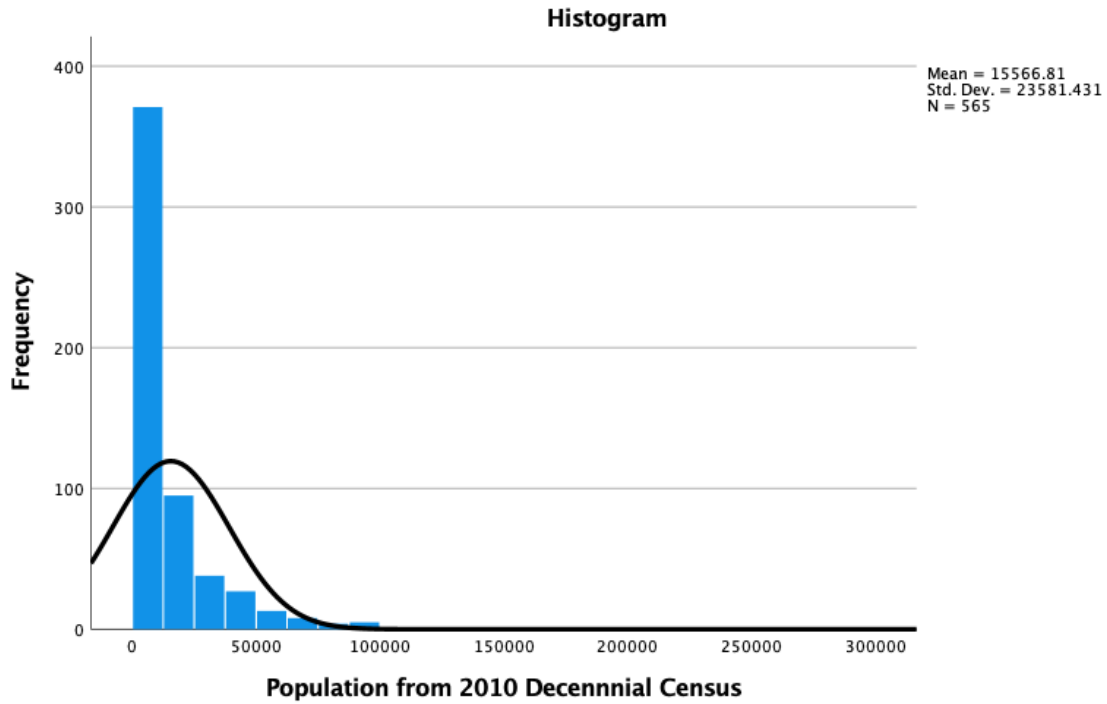
Limitations:
The 2020 Decennial Census would have been a more accurate reflection of the current population, had it been able to be used.

Further Consideration:
Will the legislature update the Criterion for Impact Zones over time to reflect current conditions for all the variables, or is this list a static, point-in-time selection process that will remain in effect in perpetuity?

County Classification

Definition:

40A:6-1. For legislative purposes, counties are classified as follows based upon their population as ascertained by the most recent federal decennial census:

a.   First class-- counties having a population of more than 550,000 and a population density of more than 3,000 persons per square mile;

b.   Second class-- all other counties having a population of more than 200,000 except such counties bordering on the Atlantic ocean;

c.   Third class--counties having a population of not less than 50,000 but not more than 200,000 except such counties bordering on the Atlantic ocean;

d.   Fourth class--counties having a population of less than 50,000 except such counties bordering on the Atlantic ocean;

e.   Fifth class--counties bordering on the Atlantic ocean having a population of more than 125,000;

f.   Sixth class--counties bordering on the Atlantic ocean having a population of not more than 125,000.

L.1979, c.181, s.1; amended 1981, c.462, s.44; 2001,c.336.

Assumptions
No assumptions were made. This was an objective measure.

Descriptive Statistics:

Table 6: Impact Zones by County Classification

Impact Zones by County Class	
County Class	**Number of Impact Zones**
1	10
2	52
3	7
5	10
6	5

Table 7: County Classification Descriptive Statistics

County	Classification	Area (Land), Sq. Meters	2020 Census Population Count (100%)	Population Density
Atlantic County	5th Class	1,438,774,368	274,534	494
Bergen County	1st Class	602,918,754	955,732	4106
Burlington County	2nd Class	2,070,157,273	461,860	578
Camden County	2nd Class	573,315,345	523,485	2365
Cape May County	6th Class	651,437,935	95,263	379
Cumberland County	3rd Class	1,251,898,249	154,152	319
Essex County	1st Class	326,557,433	863,728	6850
Gloucester County	2nd Class	833,976,887	302,294	939
Hudson County	1st Class	119,640,822	724,854	15692
Hunterdon County	3rd Class	1,108,086,284	128,947	301
Mercer County	2nd Class	581,297,767	387,340	1726
Middlesex County	2nd Class	800,881,307	863,162	2791
Monmouth County	5th Class	1,212,585,330	643,615	1375
Morris County	2nd Class	1,193,911,893	509,285	1105
Ocean County	5th Class	1,627,252,596	637,229	1014
Passaic County	2nd Class	481,772,300	524,118	2818
Salem County	3rd Class	859,519,174	64,837	195
Somerset County	2nd Class	781,829,190	345,361	1144
Sussex County	3rd Class	1,343,325,260	144,221	278
Union County	1st Class	266,163,567	575,345	5599
Warren County	3rd Class	923,435,921	109,632	307

(Table header spanning row: County Classifications 2021)

Unemployment Rate 2019

Assumptions:
Based upon average annual unemployment rates estimated for the relevant calendar year by the Office of Research and Information in the Department of Labor and Workforce Development.

Descriptive Statistics:
There were no missing records in the unemployment data and the range in values was from zero at the low end to 14.4 percent at the high end.

Table 8: Unemployment Rate Descriptive Statistics

Unemployment Rate 2019

Descriptive Statistic	Value
Number Valid	565
Number Missing	0
Mean	3.38
Median	3.10
Std. Deviation	1.32
Range	14.4
Minimum	0
Maximum	14.4

Histogram

Mean = 3.38
Std. Dev. = 1.323
N = 565
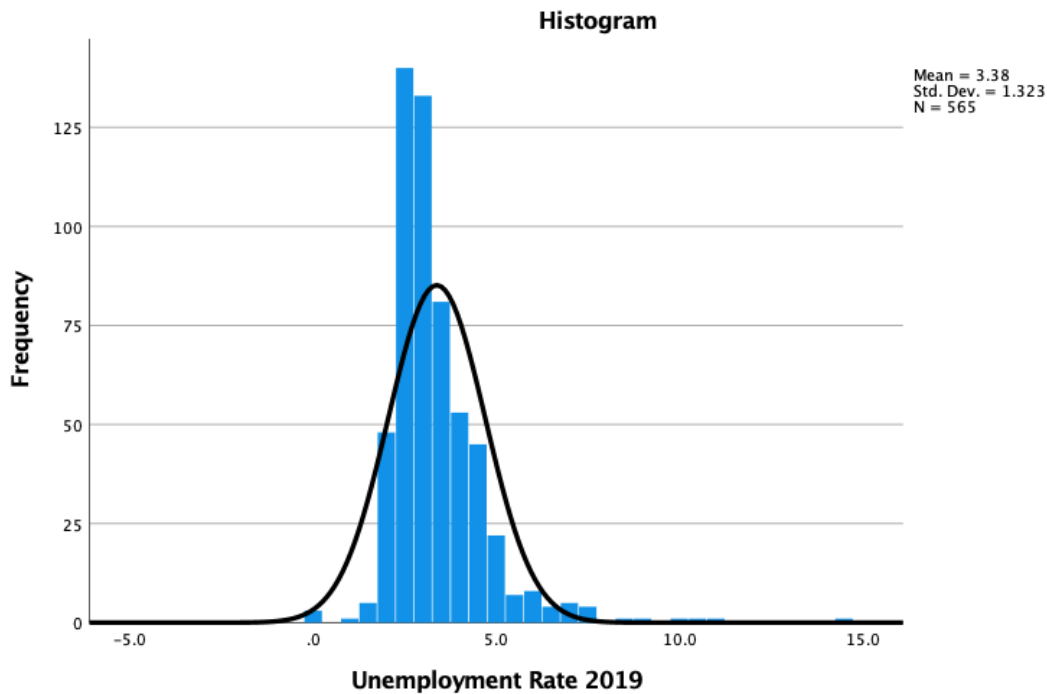
Limitations:
These data do not account for the Impact of the COVID-19 pandemic on employment because they were collected in 2019.

Percent Rank of Unemployment Rate 2019
Definition:
A calculated field that measures the relative percentile ranking of municipalities in the State for unemployment rate. Values for this field range from zero to ninety-nine. Contrary to most cases involving decimal values, the rule of thumb would be to round up decimals greater than or equal to .5 to the next highest number. This is not the case for the ninety-ninth percentile. While you can have a value that approaches one hundred percent, a value can never be relatively better than itself, therefore, there is no 100th percentile.

Calculation:
=PERCENTRANK.EXC($E$2:$E$566,E534,3)

Calculation Description:
Calculate the percentile rank of 565 values reported for unemployment rate.

Number of Marijuana Possession Violations in 2019

Assumptions:

1) Examining the legislatures language in A21, "based upon data for calendar year 2019, ranks in the top 40 percent of municipalities in the State <u>for marijuana- or hashish-related arrests</u> for violation of paragraph (4) of subsection a. of N.J.S.2C:35-10;", it was determined that the raw number of arrests per municipality would be used for the calculations. This in contrasts with the Crime Index variable (discussed below), which is normalized to the number of violations per 100.000 residents. While it might be reasonable to assume that the legislature also wanted the arrests to be normalized to per 100,000 residents, it is not clearly indicated in the language that this was their intent. Therefore, it was determined that raw number of arrests would be used for this variable.

2) There were seventeen missing values for this variable which needed consideration. The descriptive statistics below demonstrate that there was no value lower than one in the data set. It is reasonable to assume that the state police only reported municipalities where arrests occurred. This conclusion was drawn because, it is also likely that at least some percentage of all municipalities would have had no arrests. In this case the missing values represent three percent of all the municipalities. It is a reasonable conclusion that this small set of outliers would have had no arrests. Finally, the state police captured all the arrests in the state. If they had been attributed to a larger municipal entity, than the municipalities with missing values, it is highly likely that the subset would not have qualified.

3) *The language in the legislation reads, "for violation of paragraph (4) of subsection a. of N.J.S.2C:35-10". This is defined as:*

   2C:35-10. Possession, Use or Being Under the Influence, or Failure to Make Lawful Disposition.

   a. It is unlawful for any person, knowingly or purposely, to obtain, or to possess, actually or constructively, a controlled dangerous substance or controlled substance analog, unless the substance was obtained directly, or pursuant to a valid prescription or order form from a practitioner, while acting during his professional practice, or except as otherwise authorized by P.L.1970, c.226 (C.24:21-1 et seq.). Any person who violates this section with respect to:

   (1) A controlled dangerous substance, or its analog, classified in Schedule I, II, III or IV other than those specifically covered in this section, is guilty of a crime of the third degree except that, notwithstanding the provisions of subsection b. of N.J.S.2C:43-3, a fine of up to $35,000.00 may be imposed;

   (2) Any controlled dangerous substance, or its analog, classified in Schedule V, is guilty of a crime of the fourth degree except that, notwithstanding the provisions of subsection b. of N.J.S.2C:43-3, a fine of up to $15,000.00 may be imposed;

   (3) Possession of more than 50 grams of marijuana, including any adulterants or dilutants, or more than five grams of hashish is guilty of a crime of the fourth degree, except that, notwithstanding the provisions of subsection b. of N.J.S.2C:43-3, a fine of up to $25,000.00 may be imposed; or

   (4) Possession of 50 grams or less of marijuana, including any adulterants or dilutants, or five grams or less of hashish is a disorderly person.

   Any person who commits any offense defined in this section while on any property used for school

purposes which is owned by or leased to any elementary or secondary school or school board, or within 1,000 feet of any such school property or a school bus, or while on any school bus, and who is not sentenced to a term of imprisonment, shall, in addition to any other sentence which the court may impose, be required to perform not less than 100 hours of community service.

b. Any person who uses or who is under the influence of any controlled dangerous substance, or its analog, for a purpose other than the treatment of sickness or injury as lawfully prescribed or administered by a physician is a disorderly person.

In a prosecution under this subsection, it shall not be necessary for the State to prove that the accused did use or was under the influence of any specific drug, but it shall be sufficient for a conviction under this subsection for the State to prove that the accused did use or was under the influence of some controlled dangerous substance, counterfeit controlled dangerous substance, or controlled substance analog, by proving that the accused did manifest physical and physiological symptoms or reactions caused by the use of any controlled dangerous substance or controlled substance analog.

c. Any person who knowingly obtains or possesses a controlled dangerous substance or controlled substance analog in violation of subsection a. of this section and who fails to voluntarily deliver the substance to the nearest law enforcement officer is guilty of a disorderly persons offense. Nothing in this subsection shall be construed to preclude a prosecution or conviction for any other offense defined in this title or any other statute

The issue for consideration is that the state police do not roll up statistics based on the specific statute, but rather into a more general category of marijuana arrests. For this reason, the data used cannot align exactly with the language in the legislation. There was only one resolution for this and that was to use the available data.

Descriptive Statistics:

The distribution of marijuana arrests skewed to the right with a long tail stretching to the right including forty-five outliers for this variable. A table of these outliers can be found in Appendix G. These data are included for informational purposes only. Also, when evaluating the context of assumptions made, taking a closer look at outliers can be instructive. The histogram in Figure 3 below shows the distribution of arrest values. The vast majority of values cluster somewhere around the median for this variable. If the outliers were trimmed, these data would approximate a normal distribution.

Table 9: Marijuana Arrests Descriptive Statistics

Descriptive Statistic	Value
Number Valid	549
Number Missing	16
Mean	67
Median	34
Std. Deviation	119
Range	1328
Minimum	1
Maximum	1329

Extremes[8] >179   48

Figure 3: Distribution of Marijuana Arrests Values

Number of Marijuana Possession Violations in 2019
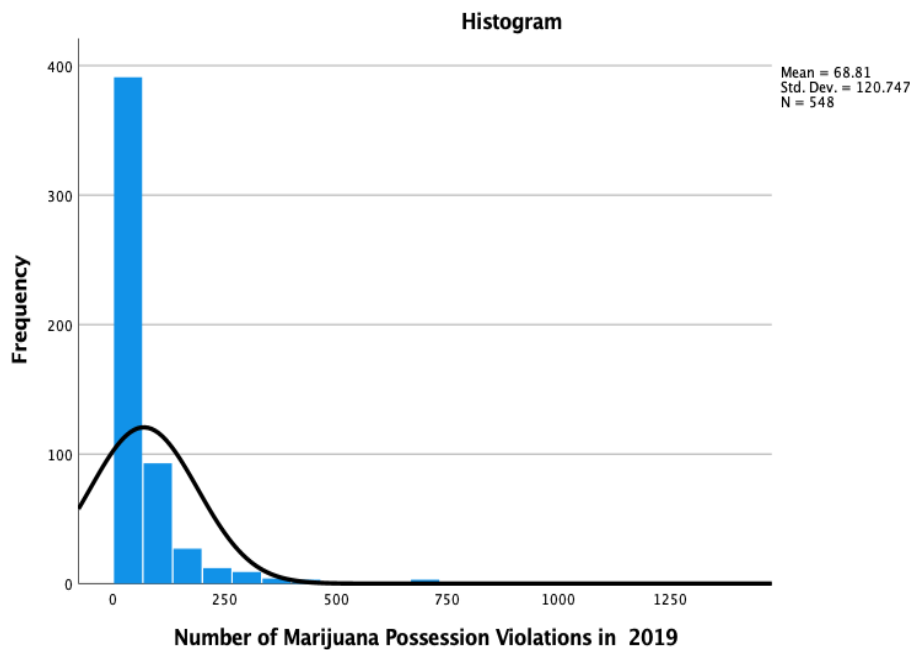
Limitations:

The data set should have included zero values where appropriate. This number is not normalized to arrests per 100,000 residents as is the case with Crime Index and therefore may underestimate the impact of marijuana arrests on smaller municipalities. However, it is also important to note, that many of the outliers with high arrest per 100,000 residents values were relatively small vacation communities whose unofficial "population" swells seasonally with vacationers.

Further Consideration:

It is important to note that the model was tested to see if any of the communities with missing values would have qualified with larger values. This proved to largely not be the case. Several (five) small towns like Tavistock and Pine Valley might have been included. Contextual examination of these towns supported the decision to use zero values. To further explore the difference between a normalized number and the measure we are using for raw arrests several statistical tests for correlation were performed. Table 8 shows the results of a test of the correlation between number of marijuana arrests and population. It demonstrates a statistically significant correlation coefficient of .7. This correlation is depicted clearly in the scatterplot below (Figure 4). This indicates that seventy percent of the of the values of the variable for marijuana arrests can be attributed to population. Population is a heavily weighted contributing variable in the model in two variables, and only thirty percent of the number of arrests are not related to having a higher population.

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[8] SPSS considers any data value to be an outlier if it lies outside of the following ranges: **3rd quartile + 1.5*interquartile range**. 1st quartile – 1.5*interquartile range.

Strong Correlation Between Arrests & Population

Variables	Correlation	Lower C.I.	Upper C.I.
1-Number of MarijuanaPossessionViolationsin2019	0.7	0.655	0.74
Population from 2010 Decennial Census		Strong	
	Heuristic	Positive	
	>.7	Correlation	

Figure 4: Scatterplot Marijuana Possession Violation vs Population.

As can be seen in Table 9 below, there is no statistically significant correlation between arrests per 100 k and population.

Table 11: Results of Pearson's Correlation Coefficient -Arrests per 100k v Population

No Correlation Between Arrests Per 100,000 Residents & Crime Index

Variables	Correlation	Lower C.I.	Upper C.I.
1-Marijuana Violations 2019 Per 100k	0.285	0.2	0.365
Population from 2010 Decennial Census	Heuristic	No	
	<.30	Correlation	

Further Consideration:

By examining the outliers in each of these categories we might learn more about how whether a of raw number of arrests or arrests per 100,000 residents is the most useful measure of a high concentration of marijuana arrests. Also, given that marijuana (cannabis) related laws have changed so drastically, decriminalizing virtually all the violations that were aggregated for this measure, any future iterations of the Impact Zone qualifications should take this into consideration.

Possession Arrests Missing

A calculated variable that indicates whether the number of arrests value was missing from the source data.

Percent Rank Number of Marijuana Possession Violations in 2019

A calculated field that measures the relative percentile ranking of municipalities in the State for marijuana- or hashish-related arrests. Values for this field range from zero to ninety-nine. Contrary to most cases involving decimal values, the rule of thumb would be to round up decimals greater than or equal to .5 to the next highest number. This is not the case for the ninety-ninth percentile. While you can have a value that approaches 100 percent, a value can never be relatively better than itself, therefore, there is no 100th percentile.

Calculation:
=PERCENTRANK.EXC($H$2:$H$566,H540,3)

Calculation Description:
Calculate the percentile rank of 565 values reported for unemployment rate.

2019 Crime Index Total

Definition:
These data come from the reports (known as the UCR-365, UCR-370, and UCR-370u18 forms) count the number of "index" crimes reported and solved: murder, rape, robbery, aggravated assault, larceny-theft, burglary, auto theft, and arson. The raw number of is reported for each of these categories and the categories are added together, divided by the population of the municipality and then multiplied by 1,000. This normalized the statistic to number per 100,000 residents.

Descriptive Statistics:
The distribution of Crime Index values skewed less strongly to the right than the marijuana arrest values. There was a tail stretching to the right including thirty-three outliers for this variable. A table of these outliers can be found in Appendix G. These data are included for informational purposes only. Also, when evaluating the context of assumptions made, taking a closer look at outliers can be instructive. The histogram in Figure 3 below shows the distribution of arrest values. These data due not cluster as closely around the median as the unemployment figures. Trimming outliers in this case would still not lead to a normal distribution.

Table 12: Crime Index Total Descriptive Statistics

Descriptive Statistic	Value
Number Valid	489
Number Missing	76
Mean[9]	1413
Median	1015
Std. Deviation	1583
Range	150000
Minimum	0
Maximum	150000
Extremes >193	33

Figure 5: Distribution of Crime Index Values
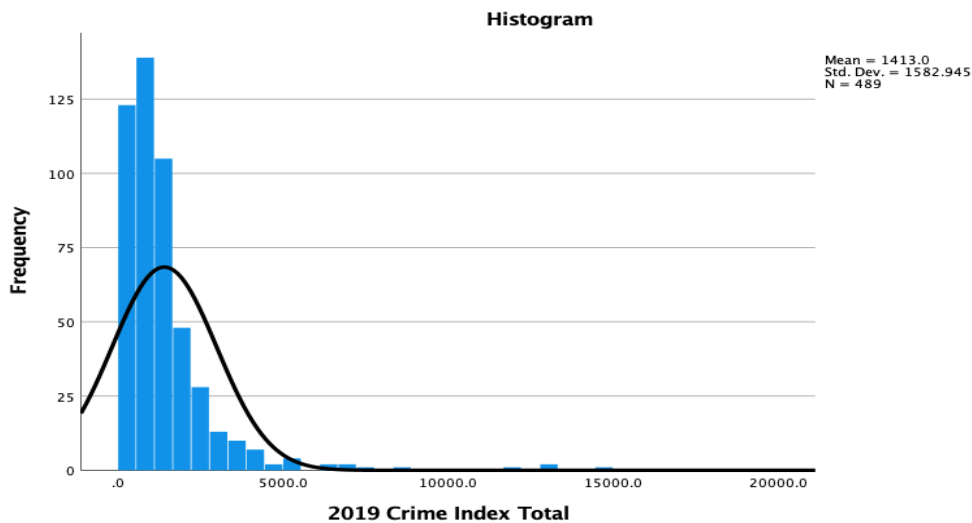
Assumptions:

The data set was missing seventy-six missing values. This accounted for approximately fourteen percent of all municipalities. The reason for this is that the way the Crime Index is compiled and reported, many smaller communities roll up to larger police jurisdictions such as a township or county police department. The model could not be run, and the legislatures intent, could not be achieved without substituting a reasonable value for the missing values. It is a heuristic to move up one level of aggregation when data values are missing, using the average value for the variable at that level. In this case, county level data was available for every missing municipality. This was the value that was chosen. The average Crime Index for the county where the municipality it was used as a replacement for missing values.

In order to test the implications of this decision on the results, iterative modeling was done substituting values that could possibly trigger a "Yes" in the model if they were different from the values used for substitution. The results of this analysis were that no community was excluded solely based on having a

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[9] Teterboro was excluded in in the mean and median of the descriptive statistics because it has a Crime Index ten times higher than the next highest municipality and a population of 33. I consider it a statistical anomaly.

missing value replaced with the county average. This would support the assumption that was made to use the county level data.

Limitations:
The fact that the measure was missing values did not have an impact in this iteration of the Impact Zone selection process.

Further Consideration:
It cannot be guaranteed, that the replacement values would not impact new models, based on new data, going forward.

Crime Index MISSING

Definition:
A calculated variable that indicates whether the Crime Index value was missing from the source data.

Class 1 Impact Zone

Definition:
Has a population of 120,000 or more according to the most recently compiled federal decennial census as of the effective date of P.L.2021, c.16 (C.24:6I-31 et al.).
Assumptions:

Calculation:
=IF(C88>=120000,"Yes","No")

Calculation Description:
If the population is greater than or equal to than 120,000, a municipality is included, otherwise they are not.

Class 2 Impact Zone

Definition:
Based upon data for calendar year 2019, ranks in the top forty percent of municipalities in the State for marijuana- or hashish-related arrests for violation of paragraph (4) of subsection a. of N.J.S.2C:35-10; has a crime index total of 825 or higher based upon the indexes listed in the annual Uniform Crime Report by the Division of State Police; and has a local average annual unemployment rate that ranks in the top fifteen percent of all municipalities, based upon average annual unemployment rates estimated for the relevant calendar year by the Office of Research and Information in the Department of Labor and Workforce Development.

Calculation:
=IF(AND(I88>=60%,K88>=825,F88>=85%),"Yes","No")

Calculation Description:
If the relative Percentile Rank of Marijuana Arrests is greater than or equal to sixty percent and the Crime Index Total is greater than or equal to 825 and the relative Percentile rank of Unemployment Rate is greater than or equal to eighty-five percent, a municipality is included, otherwise they are not.

Class 3 Impact Zone

Definition:
Is a municipality located in a county of the third class, based upon the county's population according to the most recently compiled federal decennial census as of the effective date of P.L.2021, c.16 (C.24:6I-31 et al.), that meets all of the criteria set forth in paragraph (2) other than having a crime index total of 825 or higher.

Calculation:
=IF(AND(I88>=60%,F88>=85%,D88=3),"Yes","No")

Calculation Description:
If the relative Percentile Rank of Marijuana Arrests is greater than or equal to sixty percent and the relative Percentile rank of Unemployment Rate is greater than or equal to eighty-five percent and the municipality is a county of the Third Class, a municipality is included, otherwise they are not.

Class 4(a) Impact Zone

Definition:
Is a municipality located in a county of the second class, based upon the county's population according to the most recently compiled federal decennial census as of the effective date of P.L.2021, c.16 (C.24:6I-31 et al.): with a population of less than 60,000 according to the most recently compiled federal decennial census, that for calendar year 2019 ranks in the top 40 percent of municipalities in the State for marijuana- or hashish-related arrests for violation of paragraph (4) of subsection a. of N.J.S.2C:35-10; has a crime index total of 1,000 or higher based upon the indexes listed in the 2019 annual Uniform Crime Report by the Division of State Police; but for calendar year 2019 does not have a local average annual unemployment rate that ranks in the top 15 percent of all municipalities, based upon average annual unemployment rates estimated for the relevant calendar year by the Office of Research and Information in the Department of Labor and Workforce Development

Calculation:
=IF(AND(D88=2,C88<60000,I88>=60%,K88>=1000,F88<=85%),"Yes","No")

Calculation Description:
Is a municipality in a county of the Second Class and has a population of less than sixty-thousand and the relative Percentile Rank of Marijuana Arrests is greater than or equal to sixty percent and the Crime Index is greater than or equal to 1,000 and the relative Percentile rank of Unemployment Rate is less than or equal to eighty-five percent, a municipality is included, otherwise it is not.

Class 4(b) Impact Zone

Definition:
Is a municipality located in a county of the second class, based upon the county's population according to the most recently compiled federal decennial census as of the effective date of P.L.2021, c.16 (C.24:6I-31 et al.): with a population of not less than 60,000 or more than 80,000 according to the most recently compiled federal decennial census; has a crime index total of 650 or higher based upon the indexes listed in the 2019 annual Uniform Crime Report; and for calendar year 2019 has a local average annual unemployment rate of 3.0 percent or higher using the same estimated annual unemployment rates.

Calculation:
=IF(AND(D88=2,C88>=60000,C88<=80000,K88>=650,E88>=3),"Yes","No")

Calculation Description:

If the municipality is a county of the Second Class and has a population of greater than or equal to than sixty-thousand <u>and</u> less than or equal to eighty-thousand <u>and</u> the Crime Index is greater than or equal to 650 <u>and</u> for calendar year 2019 has a local average annual unemployment rate of three percent or higher, a municipality is included, otherwise it is not.

Impact Zone Yes, or No?

Definition:
The municipality meets one of the above five criterion.

Calculation:
=IF(OR(M88="Yes",N88="Yes",O88="Yes",P88="Yes",Q88="Yes"),"Yes","No")

Calculation Description:
If the municipality is a Class 1 Impact Zone <u>or</u> a Class 2 Impact Zone <u>or</u> a Class 3 Impact Zone <u>or</u> a Class 4(a) Impact Zone <u>or</u> a Class 4(b) Impact Zone, then the municipality is included in the list of all Impact Zones, otherwise it is not.

Auditing

Auditing the results of this report included:
1) Third party verification that the correct data sources were used.
2) Third party confirmation of the assumptions that were made
3) Third party verification of the equations and conditional statements that were used to calculate the results
4) Third party verification of the values in the data cells in the matrix against the raw data.

APPENDICIES

Appendix A: Variables & Data Sources Municipalities Qualified as Impact Zones

Variable	Description	Data Source	Records	Missing Values
Municipality	Place Name	Source: U.S. Census Bureau, 2010 Census.	566	0
County	New Jersey county	Source: U.S. Census Bureau, 2010 Census.	566	0
Population from 2010 Decennial Census	Total Population in Occupied Housing Units	Source: U.S. Census Bureau, 2010 Census.	566	0
County Classification	40A:6-1 Classification of counties for legislative purposes	New Jersey Department of community Affairs	21	0
Unemployment Rate 2019	2019 NJ Annual Average Labor Force Estimates by Municipality	Office of Research and Information in the Department of Labor and Workforce Development	565	0

Variable	Description	Data Source	Records	Missing Values
Percent Rank of Unemployment Rate 2019	Calculated Relative Percentile Ranking of 2019 NJ Annual Average Labor Force Estimates by Municipality	Office of Research and Information in the Department of Labor and Workforce Development	565	0
Number of Marijuana Possession Violations in *2019*	Actual Number of Marijuana Possession Violations per Municipality in 2019	Special Report Compiled by the Division of State Police	548	17
Possession Arrests Missing	Indicates Missing Records in the Actual Number of Marijuana Possession Violations per Municipality in 2019	Special Report Compiled by the Division of State Police	565	0
Percent Rank Number of Marijuana Possession Violations in *2019*	Calculated Relative Percentile Ranking of Actual Number of Marijuana Possession Violations per Municipality in 2019	Special Report Compiled by the Division of State Police	565	565
2019 Crime Index Total	The sum of the number of Murder, Rape, Robbery, Assaults, Burglaries, Larceny & Auto Thefts per 100k population	Uniform Crime Report by the Division of State Police	489	76
Crime Index MISSING	Indicates Missing Records in the sum of the number of Murder, Rape, Robbery, Assaults, Burglaries, Larceny & Auto Thefts per 100k population	Uniform Crime Report by the Division of State Police	565	0

Variable	Description	Data Source	Records	Missing Values
Class 1 Impact Zone	Has a population of 120,000 or more according to the most recently compiled federal decennial census as of the effective date of P.L.2021, c.16 (C.24:6I-31 et al.);	Calculated Variable Based on Criteria	565	0
Class 2 Impact Zone	Based upon data for calendar year 2019, ranks in the top 40 percent of municipalities in the State for marijuana- or hashish-related arrests for violation of paragraph (4) of subsection a. of N.J.S.2C:35-10; has a crime index total of 825 or higher based upon the indexes listed in the annual Uniform Crime Report by the Division of State Police; and has a local average annual unemployment rate that ranks in the top 15 percent of all municipalities, based upon average annual unemployment rates estimated for the relevant calendar year by the Office of Research and Information in the Department of Labor and Workforce Development;	Calculated Variable Based on Criteria	565	0

Variable	Description	Data Source	Records	Missing Values
Class 3 Impact Zone	Is a municipality located in a county of the third class, based upon the county's population according to the most recently compiled federal decennial census as of the effective date of P.L.2021, c.16 (C.24:6I-31 et al.), that meets all the criteria set forth in paragraph (2) other than having a crime index total of 825 or higher; or	Calculated Variable Based on Criteria	565	0

Variable	Description	Data Source	Records	Missing Values
Class 4(a) Impact Zone	Is a municipality located in a county of the second class, based upon the county's population according to the most recently compiled federal decennial census as of the effective date of P.L.2021, c.16 (C.24:6I-31 et al.): (a) with a population of less than 60,000 according to the most recently compiled federal decennial census, that for calendar year 2019 ranks in the top 40 percent of municipalities in the State for marijuana- or hashish-related arrests for violation of paragraph (4) of subsection a. of N.J.S.2C:35-10; has a crime index total of 1,000 or higher based upon the indexes listed in the 2019 annual Uniform Crime Report by the Division of State Police; but for calendar year 2019 does not have a local average annual unemployment rate that ranks in the top 15 percent of all municipalities, based upon average annual unemployment rates estimated for the relevant calendar year by the Office of Research and Information in the Department of Labor and Workforce Development	Calculated Variable Based on Criteria	565	0

Variable	Description	Data Source	Records	Missing Values
Class 4(b) Impact Zone	Is a municipality located in a county of the second class, based upon the county's population according to the most recently compiled federal decennial census as of the effective date of P.L.2021, c.16 (C.24:6I-31 et al.): with a population of not less than 60,000 or more than 80,000 according to the most recently compiled federal decennial census; has a crime index total of 650 or higher based upon the indexes listed in the 2019 annual Uniform Crime Report; and for calendar year 2019 has a local average annual unemployment rate of 3.0 percent or higher using the same estimated annual unemployment rates.	Calculated Variable Based on Criteria	565	0
Impact Zone Yes, or No?	A municipality that has met all the necessary requirements set forth for "Impact Zones" P.L.2021, c.16 (C.24:6I-31 et al.)	Calculated Variable Based on Criteria	565	0

Appendix B: Unexpected Outcomes Analysis

Municipalities	Average of Median Income	Percent of NJ Median Family Income	Impact Zone Class	County Class
Morris Plains borough	127,226	154%	Class 4 (a)	2
Metuchen borough	126,123	153%	Class 4 (a)	2
Morristown town	125,744	152%	Class 4 (a)	2
Hanover township	125,588	152%	Class 4 (a)	2
Wayne township, NJ	123,204	149%	Class 4 (a)	2
East Brunswick township, NJ	115,029	139%	Class 4 (a)	2
Riverdale borough	110,664	134%	Class 4 (a)	2
South Plainfield borough	101,565	123%	Class 4 (a)	2
Lawrence township (Mercer County), NJ	100,930	122%	Class 4 (a)	2
Evesham township, NJ	100,720	122%	Class 4 (a)	2
Jersey City city, NJ	100,037	121%	Class 1	1
Mantoloking borough	99,444	120%	Class 2	2
North Brunswick township, NJ	96,389	117%	Class 4 (a)	2
Bordentown township	93,795	114%	Class 4 (a)	2
Eastampton township	91,616	111%	Class 4 (a)	2
Berlin borough	90,921	110%	Class 4 (a)	2
Franklin township (Somerset County), NJ	89,784	109%	Class 4 (a)	2
Lumberton township	88,397	107%	Class 4 (a)	2
Franklin township (Gloucester)	87,530	106%	Class 4 (a)	2
Dennis township	84,440	102%	Class 2	6
Pennsauken township, NJ	83,716	101%	Class 4 (a)	2

Municipality:	Metuchen borough	(Median Inc $126,123)
County	Middlesex	
Population	13574	With a population of under 60k
County Class	2	Is in a county of the Second Class
Unemployment	2.4	And Unemployment LESS than 85%
Rank Unemployment	13%	And Unemployment LESS than 85%
Marijuana Violations	151	Ranks in the top 40 percent of marijuana arrests
Rank Marijuana Possession	90%	Ranks in the top 40 percent of marijuana arrests
2019 Crime Index Total*	1234	Has a Crime Index Greater than 1000 (52% of towns)

Appendix C: Municipalities Qualified as Impact Zones

Municipalities Qualified as Impact Zones		
Municipality	**County**	**Population**
Asbury Park city	Monmouth	16116
Atlantic City city, NJ	Atlantic	39558
Bass River township	Burlington	1443
Bellmawr borough	Camden	11583
Berlin borough	Camden	7588
Berlin township	Camden	5357
Bordentown township	Burlington	11367
Bridgeton city, NJ	Cumberland	25349
Brooklawn borough	Camden	1955
Buena borough	Atlantic	4603
Buena Vista township	Atlantic	7570
Burlington city	Burlington	9920
Burlington township	Burlington	22594
Camden city, NJ	Camden	77344
Carneys Point township	Salem	8049
Carteret borough	Middlesex	22844
Cinnaminson township	Burlington	15569
City of Orange township, NJ	Essex	30134
Commercial township	Cumberland	5178
Deptford township, NJ	Gloucester	30561
Dover town	Morris	18157
East Brunswick township, NJ	Middlesex	47512
East Hanover township	Morris	11157
East Orange city, NJ	Essex	64270
Elizabeth city, NJ	Union	124969
Evesham township, NJ	Burlington	45538
Ewing township, NJ	Mercer	35790
Franklin township (Gloucester)	Gloucester	16820
Franklin township (Somerset County), NJ	Somerset	62300
Garfield city, NJ	Bergen	30487
Glassboro borough	Gloucester	18579
Gloucester City city	Camden	11456
Gloucester township, NJ	Camden	64634
Haledon borough	Passaic	8318
Hamilton township (Atlantic County), NJ	Atlantic	26503
Hanover township	Morris	13712
Hillside township	Union	21404
Irvington township, NJ	Essex	53926
Jersey City city, NJ	Hudson	247597
Lawrence township (Mercer County), NJ	Mercer	33472
Lindenwold borough	Camden	17613
Lower township	Cape May	22866
Lumberton township	Burlington	12559

Municipalities Qualified as Impact Zones		
Municipality	**County**	**Population**
Mantua township	Gloucester	15217
Maurice River township	Cumberland	7976
Metuchen borough	Middlesex	13574
Middle township	Cape May	18911
Millville city, NJ	Cumberland	28400
Monroe township (Gloucester County), NJ	Gloucester	39132
Monroe township (Middlesex County), NJ	Middlesex	39132
Morris Plains borough	Morris	5532
Morristown town	Morris	18411
Mount Ephraim borough	Camden	4676
Mount Holly township	Burlington	9536
Mount Laurel township, NJ	Burlington	41864
New Brunswick city, NJ	Middlesex	55181
Newark city, NJ	Essex	277140
North Brunswick township, NJ	Middlesex	40742
North Plainfield borough	Somerset	21936
North Wildwood city	Cape May	4041
Palmyra borough	Burlington	7398
Passaic city, NJ	Passaic	69781
Paterson city, NJ	Passaic	146199
Paulsboro borough	Gloucester	6097
Pemberton township, NJ	Burlington	27912
Pennsauken township, NJ	Camden	35885
Perth Amboy city, NJ	Middlesex	50814
Plainfield city, NJ	Union	49808
Pleasantville city	Atlantic	20249
Prospect Park borough	Passaic	5865
Riverdale borough	Morris	3559
Roselle borough	Union	21085
Salem city	Salem	5146
Seaside Heights borough	Ocean	2887
South Plainfield borough	Middlesex	23385
Southampton township	Burlington	10464
Trenton city, NJ	Mercer	84913
Tuckerton borough	Ocean	3347
Vineland city, NJ	Cumberland	60724
Washington township (Gloucester County), NJ	Gloucester	48559
Wayne township, NJ	Passaic	54717
West Deptford township	Gloucester	21677
Westampton township	Burlington	8813
Wildwood city	Cape May	5325
Willingboro township, NJ	Burlington	31629
Winslow township, NJ	Camden	39499
Woodbury city	Gloucester	10174

Appendix D: Qualified as Impact Zones by County & County Class

Impact Zones by County	
Atlantic	**5**
Atlantic City city, NJ	
Buena borough	
Buena Vista township	
Hamilton township (Atlantic County), NJ	
Pleasantville city	
Bergen	**1**
Garfield city, NJ	
Burlington	**11**
Bass River township	
Bordentown township	
Burlington city	
Burlington township	
Eastampton township	
Evesham township, NJ	
Lumberton township	
Maple Shade township	
Mount Holly township	
Pemberton borough	
Willingboro township, NJ	
Camden	**10**
Bellmawr borough	
Berlin borough	
Berlin township	
Brooklawn borough	
Camden city, NJ	
Gloucester City city	
Gloucester township, NJ	
Lindenwold borough	
Pennsauken township, NJ	
Winslow township, NJ	
Cape May	**5**
Dennis township	
Lower township	
Middle township	
North Wildwood city	
Wildwood city	

Impact Zones by County	
Cumberland	**5**
Bridgeton city, NJ	
Commercial township	
Maurice River township	
Millville city, NJ	
Vineland city, NJ	
Essex	**4**
City of Orange township, NJ	
East Orange city, NJ	
Irvington township, NJ	
Newark city, NJ	
Gloucester	**9**
Deptford township, NJ	
Franklin township (Gloucester)	
Glassboro borough	
Mantua township	
Monroe township (Gloucester County), NJ	
Paulsboro borough	
Washington township (Gloucester County), NJ	
West Deptford township	
Woodbury city	
Hudson	**1**
Jersey City city, NJ	
Mercer	**3**
Ewing township, NJ	
Lawrence township (Mercer County), NJ	
Trenton city, NJ	
Middlesex	**7**
Carteret borough	
East Brunswick township, NJ	
Metuchen borough	
New Brunswick city, NJ	
North Brunswick township, NJ	
Perth Amboy city, NJ	
South Plainfield borough	
Monmouth	**1**
Asbury Park city	
Morris	**6**
Dover town	

Impact Zones by County	
East Hanover township	
Hanover township	
Morris Plains borough	
Morristown town	
Riverdale borough	
Ocean	**4**
Mantoloking borough	
Seaside Heights borough	
South Toms River borough	
Tuckerton borough	
Passaic	**5**
Haledon borough	
Passaic city, NJ	
Paterson city, NJ	
Prospect Park borough	
Wayne township, NJ	
Salem	**2**
Quinton township	
Salem city	
Somerset	**2**
Franklin township (Somerset County), NJ	
North Plainfield borough	
Union	**4**
Elizabeth city, NJ	
Hillside township	
Plainfield city, NJ	
Roselle borough	

Grand Total   **84**

Impact Zones by County Class	
County Class	**Number of Impact Zones**
1	10
2	52
3	7
5	10
6	5

Appendix E: Population Outliers

Population Outliers from 2010 Decennial Census		
Bayonne city, NJ	Hudson	63024
Berkeley township, NJ	Ocean	41255
Bloomfield township, NJ	Essex	47315
Brick township, NJ	Ocean	75072
Bridgewater township, NJ	Somerset	44464
Camden city, NJ	Camden	77344
Cherry Hill township, NJ	Camden	71045
Clifton city, NJ	Passaic	84136
East Brunswick township, NJ	Middlesex	47512
East Orange city, NJ	Essex	64270
Edison township, NJ	Middlesex	99967
Egg Harbor township, NJ	Atlantic	43323
Elizabeth city, NJ	Union	124969
Evesham township, NJ	Burlington	45538
Franklin township (Somerset County), NJ	Somerset	62300
Gloucester township, NJ	Camden	64634
Hackensack city, NJ	Bergen	43010
Hamilton township (Mercer County), NJ	Mercer	88464
Hoboken city, NJ	Hudson	50005
Howell township, NJ	Monmouth	51075
Irvington township, NJ	Essex	53926
Jackson township, NJ	Ocean	54856
Jersey City city, NJ	Hudson	247597
Kearny town, NJ	Hudson	40684
Lakewood township, NJ	Ocean	92843
Linden city, NJ	Union	40499
Manchester township, NJ	Ocean	43070
Marlboro township, NJ	Monmouth	40191
Middletown township, NJ	Monmouth	66522
Mount Laurel township, NJ	Burlington	41864
New Brunswick city, NJ	Middlesex	55181
Newark city, NJ	Essex	277140
North Bergen township, NJ	Hudson	60773
North Brunswick township, NJ	Middlesex	40742
Old Bridge township, NJ	Middlesex	65375

Population Outliers from 2010 Decennial Census		
Parsippany-Troy Hills township, NJ	Morris	53238
Passaic city, NJ	Passaic	69781
Paterson city, NJ	Passaic	146199
Perth Amboy city, NJ	Middlesex	50814
Piscataway township, NJ	Middlesex	56044
Plainfield city, NJ	Union	49808
Sayreville borough, NJ	Middlesex	42704
South Brunswick township, NJ	Middlesex	43417
Toms River township, NJ	Ocean	91239
Trenton city, NJ	Mercer	84913
Union City city, NJ	Hudson	66455
Union township (Union County), NJ	Union	56642
Vineland city, NJ	Cumberland	60724
Washington township (Gloucester County), NJ	Gloucester	48559
Wayne township, NJ	Passaic	54717
West New York town, NJ	Hudson	49708
West Orange township, NJ	Essex	46207
Woodbridge township, NJ	Middlesex	99585
Average		69448

Appendix F: Marijuana Arrests Outliers

Marijuana Arrest Outliers 2019 (44)			
Municipality	**County**	**Population**	**Number of Marijuana Arrests**
Asbury Park city	Monmouth	16,116	366
Atlantic City city, NJ	Atlantic	39,558	404
Bordentown township	Burlington	11,367	195
Brick township, NJ	Ocean	75,072	210
Bridgeton city, NJ	Cumberland	25,349	184
Burlington township	Burlington	22,594	173
Camden city, NJ	Camden	77,344	721
Cherry Hill township, NJ	Camden	71,045	513
Clifton city, NJ	Passaic	84,136	242
East Brunswick township, NJ	Middlesex	47,512	231
East Orange city, NJ	Essex	64,270	331
Edison township, NJ	Middlesex	99,967	270
Egg Harbor township, NJ	Atlantic	43,323	185
Elizabeth city, NJ	Union	124,969	866
Elmwood Park borough	Bergen	19,403	203
Flemington borough	Hunterdon	4,581	204
Fort Lee borough, NJ	Bergen	35,345	267
Glassboro borough	Gloucester	18,579	314
Gloucester township, NJ	Camden	64,634	255
Hamilton township (Atlantic County), NJ	Atlantic	26,503	196
Hamilton township (Mercer County), NJ	Mercer	88,464	713
Hoboken city, NJ	Hudson	50,005	180
Howell township, NJ	Monmouth	51,075	261
Irvington township, NJ	Essex	53,926	312
Jersey City city, NJ	Hudson	247,597	670
Linden city, NJ	Union	40,499	284
Millville city, NJ	Cumberland	28,400	305
Mount Laurel township, NJ	Burlington	41,864	225
Neptune township, NJ	Monmouth	27,935	231
New Brunswick city, NJ	Middlesex	55,181	367
Newark city, NJ	Essex	277,140	1329
Passaic city, NJ	Passaic	69,781	621
Paterson city, NJ	Passaic	146,199	551

Marijuana Arrest Outliers 2019 (44)			
Municipality	**County**	**Population**	**Number of Marijuana Arrests**
Plainfield city, NJ	Union	49,808	460
Trenton city, NJ	Mercer	84,913	1079
Union City city, NJ	Hudson	66,455	195
Union township (Union County), NJ	Union	56,642	347
Vineland city, NJ	Cumberland	60,724	393
Wall township, NJ	Monmouth	26,164	459
Washington township (Gloucester County), NJ	Gloucester	48,559	221
Wayne township, NJ	Passaic	54,717	280
West Deptford township	Gloucester	21,677	196
Wildwood city	Cape May	5,325	238
Winslow township, NJ	Camden	39,499	284
Woodbridge township, NJ	Middlesex	99,585	206

Appendix G: Crime Index Outliers

Crime Index Outliers (33) 2019		
Municipality	**County**	**Population**
Asbury Park city	Monmouth	16116
Atlantic City city, NJ	Atlantic	39558
Audubon borough	Camden	8819
Avalon borough	Cape May	1334
Beach Haven borough	Ocean	1170
Bridgeton city, NJ	Cumberland	25349
Brooklawn borough	Camden	1955
Camden city, NJ	Camden	77344
Deal borough	Monmouth	750
Deptford township, NJ	Gloucester	30561
Egg Harbor City city	Atlantic	4243
Elizabeth city, NJ	Union	124969
Lawnside borough	Camden	2945
Lindenwold borough	Camden	17613
Loch Arbour village	Monmouth	194
Millville city, NJ	Cumberland	28400
Mount Ephraim borough	Camden	4676
Neptune township, NJ	Monmouth	27935
North Wildwood city	Cape May	4041
Oaklyn borough	Camden	4038
Paramus borough, NJ	Bergen	26342
Penns Grove borough	Salem	5147
Pohatcong township	Warren	3339
Salem city	Salem	5146
Sea Isle City city	Cape May	2114
Seaside Heights borough	Ocean	2887
Somerdale borough	Camden	5151
Stone Harbor borough	Cape May	866
Teterboro borough	Bergen	67
Ventnor City city	Atlantic	10650
Watchung borough	Somerset	5801
Wildwood city	Cape May	5325
Woodbury city	Gloucester	10174
Average		**15,304**

Appendix G: Marijuana Arrest per 100k Outliers

Marijuana Arrests per 100k Outliers			
Municipality	**County**	**Population**	**Number of Marijuana Arrests per 100k**
Allenhurst borough	Monmouth	496	36.29
Allentown borough	Monmouth	1,828	200.22
Bass River township	Burlington	1,443	57.52
Bordentown city	Burlington	3,924	20.9
Brooklawn borough	Camden	1,955	33.25
Buena borough	Atlantic	4,603	20.42
Cranbury township	Middlesex	3,857	21.52
Deal borough	Monmouth	750	41.33
Essex Fells borough	Essex	2,113	156.65
Far Hills borough	Somerset	919	68.55
Farmingdale borough	Monmouth	1,329	30.1
Flemington borough	Hunterdon	4,581	44.53
Haledon borough	Passaic	8,318	19.24
Highlands borough	Monmouth	5,005	52.15
Hope township	Warren	1,952	34.32
Interlaken borough	Monmouth	820	47.56
Island Heights borough	Ocean	1,673	60.97
Knowlton township	Warren	3,055	20.62
Lakehurst borough	Ocean	2,654	61.42
Lavallette borough	Ocean	1,875	27.2
Little Silver borough	Monmouth	5,950	27.73
Loch Arbour village	Monmouth	194	242.27
Long Beach township	Ocean	3,051	45.23
Lower Alloways Creek township	Salem	1,770	43.5
Mantoloking borough	Ocean	296	256.76
Monmouth Beach borough	Monmouth	3,279	70.45
Mountainside borough	Union	6,685	19.45
New Hanover township	Burlington	7,385	30.47
North Wildwood city	Cape May	4,041	28.46
Pemberton borough	Burlington	1,409	41.87
Pohatcong township	Warren	3,339	27.85
Point Pleasant Beach borough	Ocean	4,665	24.65
Riverton borough	Burlington	2,779	19.07
Roosevelt borough	Monmouth	882	108.84
Seaside Heights borough	Ocean	2,887	23.21

Marijuana Arrests per 100k Outliers			
Municipality	**County**	**Population**	**Number of Marijuana Arrests per 100k**
Ship Bottom borough	Ocean	1,156	21.63
South Toms River borough	Ocean	3,684	21.72
Springfield township (Burlington)	Burlington	3,414	37.49
Surf City borough	Ocean	1,205	43.15
Teterboro borough	Bergen	67	223.88
Tuckerton borough	Ocean	3,347	22.41
Washington township	Burlington	687	62.59
Wildwood city	Cape May	5,325	44.69
Average		**3058**	**59**

Appendix H: Map of Impact Zones
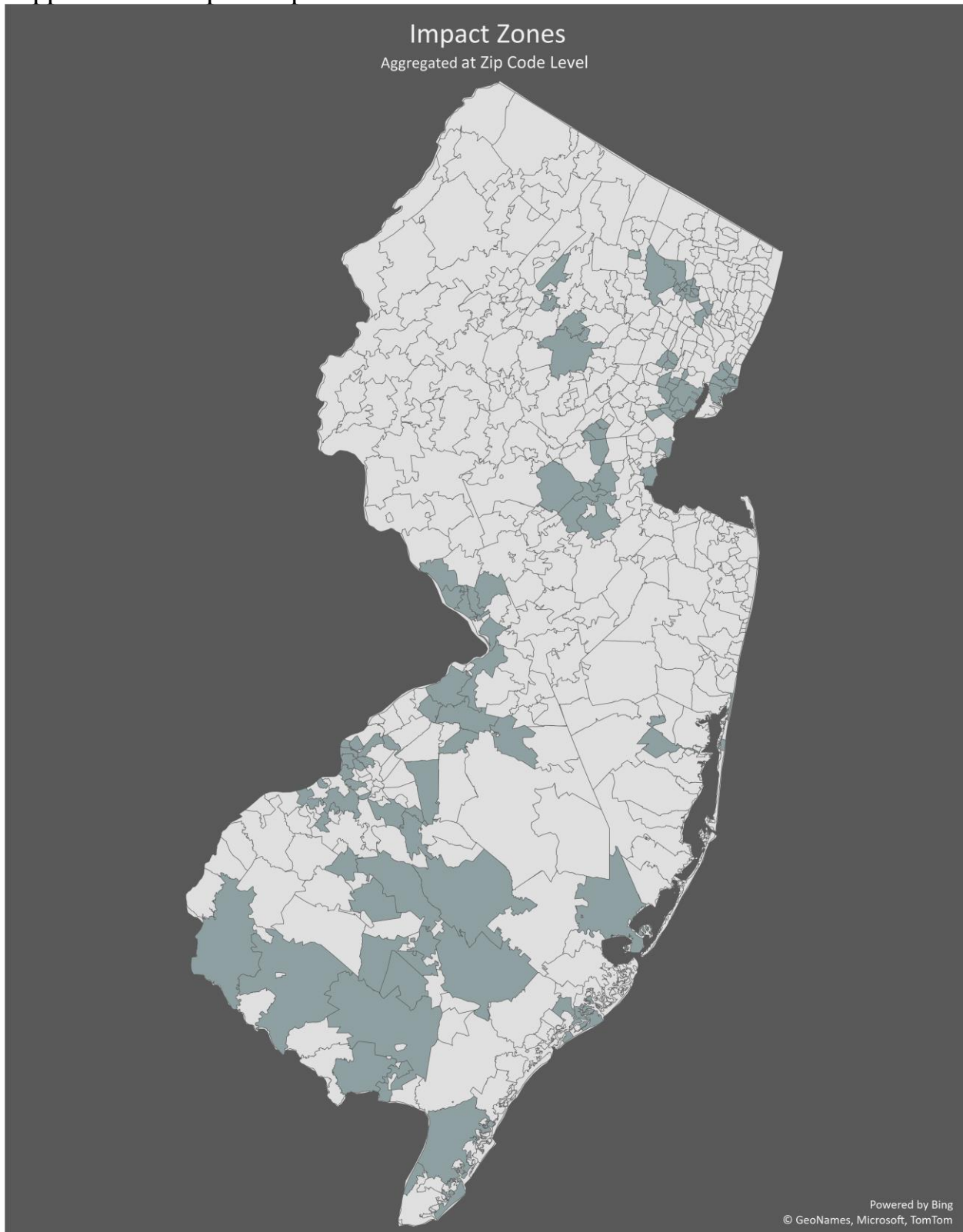
Map 1: Impact Zones using Zip Code to Map

Appendix I: Map of Impact Zones Weighted by Median Income

Map 2: Impact Zones by Median Income